

RURAL ENTERPRISE DEVELOPMENT (RED)

VALUE CHAIN ANALYSIS OF THE INDIGENOUS POULTRY SUB-SECTOR, KILIFI AND KWALE DISTRICTS - KENYA

BY:

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FOR:

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ABBREVIATIONS

BDS	Business Development Services
BS	Business Services
CORPs	Community-oriented Resource Persons
CRSP (K)	Coastal Rural Support Programme (Kenya)
DLEC	District Livestock Extension Coordinator
DLEO	Division Livestock Extension Officer
DLPO	District Livestock Production Officer
DVO	District Veterinary Officer
ED	Enterprise Development
FFS	Farmer Field School
FGDs	Focus Group Discussions
KWAP	Kwale Agricultural Project
LASDAP	Local Authorities Services Delivery Action Plan
LATF	Local Authorities Transfer Fund
NPDP	National Poultry Development Programme
PPI	Productive Physical Infrastructure
RED	Rural Enterprise Development
SFR	Small farm reservoir
SMS	Subject Matter Specialists
SO	Social Organisation
SSA	Sub-sector Analysis
TI	Technical Intervention
ToRs	Terms of Reference
VCA	Value Chain Analysis
VDOs	Village Development Organisations

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Within the CRSP (K) family in general, I would like to recognized efforts of Ross Smith, Joseph Thoya, Mwanjole Ngoro, Margaret Mulongo, Iha Thoya, Margaret Ngari, Matilda Karume, Ngala and Mapenzi. The SO, TI and PPI teams were particularly valuable in arranging meetings and also participating in the FGDs that were conducted in order to map and determine the value chains in the sub-sector.

During the fieldwork, varied respondents were contacted and met; individual indigenous poultry keepers, informal breeders, poultry brokers, distant traders, market-based traders, fast-food café operators and government officers. It is from the interest and availability of these contacts that essential information was gathered and consolidated. It is the analysis of this information that forms the backbone of the issues and recommendations presented in this report. To this extent, I am indebted to these individuals – for their time, information, and extensive knowledge sharing.

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It may not be possible to mention all those who supported this work by name but generally, I appreciate and acknowledge extensive support from all who contributed to the delivery of this output in one way or the other.

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EXECUTIVE SUMMARY

INTRODUCTION:

The value and social importance of indigenous poultry among rural households in Kenya cannot be under-estimated. The history of traditional keeping of chicken is long yet its economics has not been adequately exploited. In the Coast Province and in particular Kwale and Kilifi Districts, indigenous poultry keeping is evident. Over the period of programme work by CRSP (K), there has been interest and efforts to support the local communities in the region develop specific sub-sectors in which commercialisation can be nurtured to address food insecurity and create wealth. This study was commissioned by RED, a department within CRSP (K) as a follow-up to an initial preliminary sub-sector analysis with the aim of deepening the understanding of the opportunities for intervention. Indigenous poultry sub-sector was selected for this stage of analysis after consistent comparative assessment of potential viability rating of four; indigenous poultry, charcoal production, cowpeas leaves and groundnuts. The development of this sub-sector has opportunities since the main destination market for poultry is still supplied by some distant sources of which the region can take advantage of.

This survey has been undertaken with the aim of contributing in the strategic envisioning of RED as well as to identify and facilitate gleaning of potential opportunities for intervention. RED believes that the best approach to support the rural communities is through enterprise and working from the BDS paradigm shift. The study brings out sector organisational aspects, sub-sector map revision, value-chain mapping, isolation of constraints and matching opportunities. It also outlines the feasibility status for any intervention based on the approaches to be adopted. It is a core purpose of this survey that intervention mechanisms are identified and analysed appropriately while presenting caveat, where necessary.

To deliver as per the Terms of Reference, a detailed and consistent methodology was applied. Efforts were made to collect and analyse relevant secondary data prior to the field engagement. Additional secondary information was collected from government offices as the consultant contacted field-related discussions. Tools for collecting primary data were designed, shared and discussed with the client. During a period of 2 weeks, the consultant worked closely with the RED, SO, PPI and TI staff to conduct focus group discussions and related personalised consultations with poultry keepers, poultry brokers and traders, government officers, and informal breeders on relevant issues to the VCA. In total, 15 VDOs were identified and their representatives invited for consultations. In addition, efforts were made to visit 7 chicken action points and to witness the processes.

RESULTS OF THE VALUE CHAIN MAPPING:

The indigenous poultry sub-sector has remained largely rudimentary in the two districts. Chicken ownership is diverse – there is a tendency to find men, women and children poultry owners. Currently, the proportionate poultry ownership ratio is in favour of men followed by women - 13:10:6. This sub-sector is low-input based without supplementary feeding. Chickens are left independent – on free-range to scavenge and look for food. Often, they source supplementation from kitchen left-overs of which they have to compete with dogs. Modern drugs are rarely used to address diseases and pests. There is significant reliance on herbs that are mainly self-administered. Less than 5% of the households have built dedicated pens for their flocks while the rest either share the main house with the birds or have set aside the kitchen. Breeding is left to chance while average flock sizes are limiting – ranging from 7 to 16 though the chicken egg laying capacity is 11 to 15 eggs. Mortalities are relatively high with limited survival rates across the varied ages. Currently, the contact market nodes are brokers as the producers are disadvantaged by lack of market information.

Flock trading arrangements take place throughout the week. Different markets have dedicated periodic market days though Mariakani, Likoni and Mombasa operate throughout the week. Brokers are important market connectors as they source birds from producers in the interior to supply traders operating in the markets. Of the various transitional bulking markets identified, Samburu and Kinango are the most important. They handle the highest number of birds per market day. Samburu is the most competitive of all with the highest level of trade interactions - out of its convenient location and ease of access.

The current sub-sector map shows a market interaction characterised by two channels and the following functions;

- ❑ Production – in which it is estimated that there are 15,800 households involved. The role of women in poultry management is significant through provision of basic care. 95% of the poultry in the region is associated with the households; more than 90% of the households keep indigenous chicken. Of the households, less than 5% have dedicated poultry pens. Other players in production are informal breeders and producer groups. Informal breeders exhibit good practices in production though they only accounts for 3% of the poultry produced while producer groups take up only 2%.
- ❑ Secondary bulking and transportation – brokers handle 95% of poultry reaching distant and other traders in the two districts. Women are quite few in brokerage owing to the heavy burden of the associated tasks (accounting for 17.2%). Broker categories are of two types; village-based brokers responsible for bulking throughout the week, and trading routes-based brokers who act as itinerant traders. Villages-based brokers have comparatively fairer prices and are directly linked to associating traders for which they have supply arrangement. These traders on the other hand extent some credit facilities (though limited) for retention and continuity of the relationship.
- ❑ Primary bulking – there are about 1.3 brokers per trader. The proportion of women is higher in the trader category – accounting for about a quarter of all traders. Prices of cock and hen are differentiated with cock being higher by Kshs. 35.00 to Kshs. 45.00 although the production costs are generally the same. In primary bulking, two categories emerge; Distant traders and Stationary traders. Traders face a number of challenges including double payments to the council, high mortalities of chicken in transit and general high operation costs.
- ❑ Transportation and wholesaling – traders are involved in this function. Mainly, they rely on bicycles, public transport and hand-carts to accomplish the transportation component. In the destination markets in Mombasa, they supply market traders for whom they have developed some supply relationships.
- ❑ Retailing – this function has differentiated players. Apart from distant and stationary traders, all other categories are involved in retailing. However, prices vary considerably depending on point of sale within the functional points in the sub-sector map.

There are 5 market hierarchies (production end, brokering point, source /tertiary markets, secondary markets, and primary /terminal markets) at which interactions take place within the poultry value chain. Deductive analysis from the value chain illustrates that;

- ❑ Cocks attract a higher return along the marketing chain compared to hens yet only 26% of the birds marketed are cocks
- ❑ In different trading categories, brokers have better margins from poultry trade
- ❑ Tertiary markets are less lucrative points of trade as average returns are minimal
- ❑ Poultry producers receive only 18% of the mean terminal market price in Mombasa
- ❑ There are no traders directly sourcing poultry from the farmers and selling directly to the terminal distant markets due to distances and bulking processes
- ❑ There are no proper and transparent mechanisms of price determination in the market sphere.

The indigenous poultry sub-sector currently has a supply gap apparent from the general sourcing of poultry destined for the Mombasa market from distant sources such as Kitui and Makueni yet Kilifi and Kwale have requisite production potential. 45% of poultry consumed in Mombasa come from Kitui and Makueni. By adopting and taking up poultry production as a business and considering viable flock size (of 50 plus birds), the households and informal breeders stand a good opportunity to exploit the existing market potential. A household with a minimum viable flock would be making at least Kshs. 3,500.00 per month from the sale of birds. There are opportunities to make more depending on the management systems and approaches adopted.

There are number of threats to market competitiveness though these are general to the sub-sector. Such include market competition from exotic birds, diseases, pests and predation, costs of drugs and general bird mortalities. Prices are relatively low and are not expected to improve significantly in the future. The general market organization is weak and less-determinable. The state of value-addition as the sub-sector operates is quite minimal. In an effort to improve it, opportunities for value-addition exist at production, brokerage, market structure developments, input supply arrangements and trading. Better supported services and re-organisation would motivate producers and other actor categories to pay for services though at the current state, the willingness to pay is considerably low.

A number of notable constraints impact negatively on the sub-sector organisation, growth and operations, and competitiveness;

- High incidences and rates of diseases at the production and trading points with the main diseases being Newcastle disease infectious coryza and the chronic respiratory diseases
- High mortality rates at the production point and on transit to the markets
- Low capitalization and limited access to credit for traders as well as the production end
- Absence of participation and active involvement of the municipal authorities in markets development and marketing activities
- Transportation mechanisms and associated challenges.

Efforts to integrate approaches of addressing these constraints present valuable opportunity in;

- Increasing the sub-sector production and hence the incomes of the producers
- Enhancing the quality of birds from the region
- Increasing general sub-sector management knowledge and competence
- Facilitating active participation of women in the sub-sector
- Overall commercialization and general organization /linkages development.

RECOMMENDED APPROACHES AND ACTIONS:

The indigenous poultry sub-sector is a viable broad enterprise in which CRSP (K) is better placed to intervene. Though, a number of pre-conditions are noteworthy;

- Owing to weaker production side, significant efforts are required in stimulating production through a number of approaches including sensitisation, support in breed selection, extensive extension support and training in disease management.
- Initial targeting of commercial services should focus on producer groups or a village rather than individuals. The capacity to pay for services is still limited due significant rural poverty.
- Adopting BDS in entirety will be dangerous for the sub-sector as this is a weak market and therefore process subsidisation has to be factored with a graduated arrangement for reduction and gradual withdraw when value for the provision of related services become apparent. However, this will not just happen and hence CRSP (K) will need to develop structures and systems that encourage uptake of services by working with progressive farmers and brokers as service providers.

- ❑ Efforts should be made to identify opportunities and points for embedded service promotion and provision at the start to stimulate the service growth in general.
- ❑ A medium-term programme is better placed to guarantee impacts. CRSP (K) should not focus on less than 5 years programme since maximum support at the production end is required while first sales would not be forthcoming before a lapse of 18 months.
- ❑ Comprehensive partnership in the implementation with stakeholders in relevant government departments is essential. The RED unit further lacks requisite staffing and this would need serious consideration.

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1.0. INTRODUCTION

1.1. Background to the Study

Under the current Economic Recovery Strategy document under which the country's economic development focus is based, wealth creation and poverty reduction are important pillars. The strategy is being implemented on the understanding that poverty has remained a challenge to economic performance in both rural and urban environment (GoK, 2003). It is on the same basis that the Coastal Rural Support Programme (Kenya) aligns its operations to address poverty in Kilifi and Kwale Districts, and especially in the arid zones where income-generation options are limited (CRSP (K), 2005). The agency, currently operating in 23 sub-locations falling within 10 locations (of 4 administrative divisions), has been in the region for the last 7 years.

Specifically, the 4 arid divisions of Kwale and Kilifi Districts, specifically Bamba, Kaloleni, Samburu and Kinango exhibit significant levels of poverty and resource inadequacies leading to visible risks to food poverty and general economic weaknesses. Perhaps it is these divisions that contribute to the current unfavourable rankings of the two districts; for instance for Kilifi and Kwale districts, absolute poverty levels revealed rates of 66.3% and 60.6%, respectively (according to 1997 figures).¹ As of 1999, the unemployment rates for Kilifi and Kwale Districts were 12.6% and 12.9%, respectively (SID, 2004). In Coast Province specifically, these are some of the highest rates – mainly contributed by the arid areas where income alternatives are limited. On employment, the female – male gap for the two districts is significant; -52.9% (Kilifi) and - 59.6% (Kwale). This gap further stands to support the potential poverty challenge in the two districts owing to the fact that incomes among women have a major role in ensuring that households have access to food and other essentials.

On the basis of the above background and brief situational analysis, the state of poverty in the districts, and especially in the arid regions is wanting. The operations and activities of CRSP (K) in the region targets poverty alleviation through varied approaches; strengthening local organisations, supporting entrepreneurship and rural income generation, facilitating identification and development of infrastructure and related facilities, providing technical advise in productive sectors, among others. One of the units within CRSP (K), the RED aims at developing market systems within the potential enterprise streams that offer diversified and reliable income growth and employment generation opportunities, targeted especially to women and the poorest, through an approach of facilitative market enhancement that reflects current good practice. RED, over the recent past has evaluated a number of sub-sectors within the 4 divisions with a view to identifying opportunities to realise its goal. These sub-sectors include cowpeas leafs, groundnuts, charcoal production, and indigenous poultry production and marketing. For these sub-sectors, sub-sector analysis and initial mapping was carried out between March and April 2005. A further review of the emerging issues showed that there was need to drop a number of these from the priority list leading to selection of the indigenous poultry sub-sector as a priority one for deeper analysis.² It is based on the need to carry out a detailed analysis of the indigenous poultry sub-sector that this study was commissioned, building on the previous sub-sector analysis (SSA) to provide additional information and facilitate RED in pinning the opportunities.

¹ It is expected that this figure has gone up over the years as a result of economic hardships associated with decreasing land productivity. Compared to the national level of 52.6%, the divisions exhibit significant poverty levels.

² Most of the other sub-sectors were dropped at the second level of screening out of their over-reliance on rains, policy and environmental concerns (for charcoal), and general limited opportunities.

1.2. Interpretation of the Terms of Reference

The RED Unit is in the process of developing its strategy and determining the sub-sectors to support under the BDS paradigm shift. Of special interest are sub-sectors with distinguishable opportunities for income generation, employment creation, involvement of women and enhancing the capabilities of households to strengthen livelihood systems with minimum input. Indigenous poultry keeping is one such sub-sector in which people in the 4 divisions have engaged over the years and acts as a fallback especially when incomes are limited from the other sources. Despite past efforts to develop it, little has been achieved in sustaining and managing it commercially. Though a number of studies have been carried out focusing on sub-sector in the Coast Province, there has been little interest in the business opportunities and the value chain issues.³ The commissioning of this study is on two accounts, thus;

- ❑ Contribute towards the development of the RED's strategy and focusing of its work for the next three years
- ❑ Provide additional details that can facilitate RED to affirm the value of intervening in the sub-sector – by re-defining the inherent opportunities and the intervention approach.

It is understood that this study is commissioned to provide CRSP (K) with crucial information regarding the feasibility of moving forward with interventions in the sub-sector and coming up with a viable plan of action for the approach(es) that will best allow this to happen if so recommended. The study focuses on the identification and understanding of structural, organizational (behaviour) and operational (performance) dynamics of the indigenous poultry sub-sector, and confirmation or disqualification of the potential opportunities previously identified. This study is expected to identify concrete activities and methods, based on the recommendations supported by appropriate rationale and feasibility provisions. The emergent report bases findings on both qualitative and quantitative information gathered in the field.

This report outlines in detail, recommended approaches to the project design based on identified and specific constraints and opportunities. At the same time, the methodology for intervention is provided. Emphasis is placed on the role of the intermediaries especially in BDS as well as mechanisms of intervention entry. In carrying out this study, efforts have been made to;

- ❑ identify key information gaps and capture information needed to fill these gaps.
- ❑ identify and consolidate relevant constraints and opportunities along the value chain to inform design of future interventions and activities to realize expected impacts.
- ❑ perform a detailed analysis of the sub-sector in terms of its potential for income and employment generation and document opportunities for BDS
- ❑ assess the feasibility, practicability, willingness and appropriateness of stakeholders and service providers to expand the services they offer.
- ❑ project /estimate in quantitative terms the likely returns or anticipated impact on the target community in terms of production, income and employment generation levels through investments in the development of the sub-sector.
- ❑ make concrete suggestions on the sequence of activities /actions needed to address the opportunities and constraints.
- ❑ determine potential options for value addition by communities and recommend whether they are appropriate.
- ❑ measure level of market demand /saturation in the local and regional markets.
- ❑ make specific recommendations on possible approaches that CRSP (K) should use and /or avoid.

³ This study takes into cognisance two related surveys; ASP /MEDP /MFFI-DANIDA., April 2004. *Poultry Farming in Kwale and Taita Taveta Districts of Kenya*, and Fowler B., April 2005. *Analysis of the Indigenous Poultry Sub-sector in Kwale and Kilifi Districts of Kenya – Preliminary Findings*.

1.3. VCA Methodology and Assumptions

1.3.1. Methodology

This study was commissioned in October 2005. The process covered preparatory stages, field data collection, data analysis and development of the report. The field data collection stage involved the participation of CRSP (K) staff – in planning as well as participatory interviews. Of the three core stages, the proportionate time allocation was; 6% (preparatory), 70% (data collection and preliminary analysis), and 24% (data synthesis and reporting). Overall, 16 days were committed to the VCA.

The preparatory phase involved design and development of data collection schedules and guidelines, and assemblage of background materials and reviews. Various secondary data sources included sector reports, monthly reports from the DLPOs' offices and other relevant reports. Such reports referred to within this document, and are also separately filed in the reference list. It is on the basis of the review that reflective gaps were identified that would form the pillars for the VCA. Again, this was in line with the study objectives. The tools were pre-shared with the CRSP (K) contact point for feedback before their application.

At the data collection stage, pre-discussions about the interests of CRSP (K) in the VCA shaped the sampling process and identification of some primary sources of information. The bulk of the sources of primary data were producers from whom information was collected through participatory discussions organised in 8 sessions and bringing together 15 VDOs. The interview and consultation guidelines are presented in this report as attachments (see Annexes 2.0a to 2.0e). Information was collected from;

- 205 participants (73.7% - women, 26.3% - men) forming the producer cluster
- 14 chicken traders (35.7% - women, 64.3% - men) in different markets
- 1 informal poultry breeder
- 3 council officers - representation from the local government
- 8 government officers – in production and veterinary services field
- 2 hotel /fast food business operators.

The field consultations were designed to capture the following information;

- Information from key participants in the value chain, and from keepers of poultry and suppliers of supportive services – to understand the current breeding arrangements, demand and potential demand of supportive services, marketing arrangements, and willingness to pay for services and other inputs, operational constraints
- Information from markets of poultry both at intermediate and end markets – to understand demand, operational constraints, interrelationships and associations
- Information from policy implementers and field officers – to understand their place in the value chain, potential opportunities for developing and stimulating the sub-sector.

The final stage of the VCA was undertaken in Nairobi. The report was prepared based on standard VCA process while taking into consideration additional requirements stated and documented in the ToRs (see Annex 1.0). The development of the analytical sections of the report involved detailed data evaluation. A preliminary output was prepared and submitted to the client soon after the fieldwork. The contents of this preliminary analysis are integrated in this document.

1.3.2. Critical Assumptions

In carrying out this VCA, a number of guiding assumptions were considered – especially in identifying sample sites for data collection;

- ❑ That 15 VDOs would present representative data that can be generalised for the 116 VDOs in which CRSP (K) works
- ❑ The 5 markets pre-selected and visited presented an illustrative case of the situation in the poultry trade suitable for generalisation
- ❑ That the initial Indigenous Poultry Sub-sector Survey contained valuable data that was authentic and in which the current VCA could build on
- ❑ That in assessing potential of the sub-sector to create employment, the core interest was to focus on potential additional income that could be tapped with full exploitation.

1.4. Rationale – The Sub-sector Baseline Information and Gaps

1.4.1. Current Baseline Data

The poultry sub-sector is an important component in the national livestock production yet there is insignificant support effort at the national level as compared to dairy and beef sub-sectors. According to 2004 figures, the national population of indigenous poultry was estimated at 21.8 million birds as compared to the exotic bird population of 7.3 million (Fowler, 2005). The sub-sector is estimated to represent 9.3% of the gross marketed production of livestock and livestock-related products. Indigenous poultry keeping is mainly a preserve of the rural areas and is regarded as a low-input practice. Of the total population of indigenous poultry, about 12% is found in the Coast Province alone (Njue, 2003).

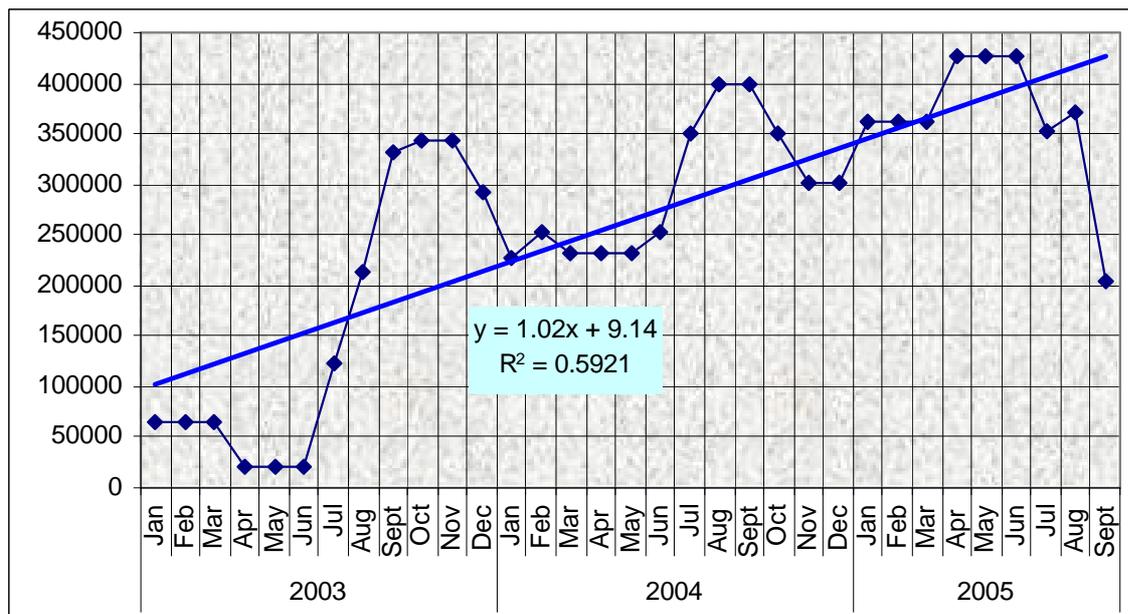
On a national scale, the number of indigenous poultry has been growing significantly over the last 15 years. It is estimated that, the population grew by 19.4% over the period despite the challenges posed by pests, diseases and predation. The sub-sector forms one of the most important sources of proteins and hence consumption is one of the highest.

In the CRSP (K) focus areas, keeping of indigenous poultry is quite popular as observable from the chicken auction sites and market days. In Kwale alone, 96% of the households keep indigenous poultry (Njenga, 2005; Fowler, 2005). The chicken in both districts occupy a unique place in asset valuation among the local people. While cattle and shoats are considered as insurance, chicken are an ‘easy’ form and source of quick income. However, markets are found at long distances from most of the producers and hence brokers capitalize on this challenge by offering non-competitive prices. Regardless, the frequency at which households sell chicken to satisfy basic home needs is relatively high. Chicken are sold throughout the year though the frequency is high at times of reduced food supply, school-opening, and during festive seasons.

In Coastal Kenya, there are different breeds and strains of indigenous birds. Their genesis is mainly from the upcountry and includes Dwarf breeds, Frizzle Feathered, Normal Feathered, Crested head and Naked Neck chicken (Njenga, 2005). However, productivity, and mortality issues remain to be resolved, for increased productivity and incomes. From the 4 divisions of interest to CRSP (K) and like the national figures, the indigenous poultry population has been increasing in the last 3 years. An assessment of the month-by-month variations show that, the first half of each of the years has witnessed slow growth – either associated to sales and /or high mortalities.

The illustration (below – Figure 1.1) shows the general trend over the period. From the illustration, it is evident that the sub-sector has potentials of contributing significantly through increased numbers and sales. The local poultry form an important source of income for 90% of households involved in the sub-sector.

Figure 1-1: Indigenous chicken population estimates and growth trends



Source; various divisional monthly reports (Kaloleni, Bamba, Samburu and Kinango)

Previous initiatives in the poultry sub-sector nationally have played an important role in mainstreaming relevant interventions; from 1976 to 1995, the National Poultry Development Programme (NPDP) focused on both the indigenous and exotic poultry.⁴ For indigenous poultry, interventions focused on production systems – improving breeding through improved cockerel exchange and supporting the emergence of informal breeding systems in the rural areas.⁵ The intervention however did not build adequate systems for continuity hence only remote activities continue independent of the programme, and too limited at individual level.

As observed by CRSP (K) in pre-selecting the indigenous poultry for further assessment, previous studies confirm that households are in local poultry because it is easy to manage, are readily available, and relatively resistant to diseases as compared to exotic birds (Njenga, 2005). There are beliefs attached to the types of chicken kept in the region, which affect the utilization and associated value. As found from the survey by Njenga, it is confirmed that indigenous chicken is valued for slaughtering to visitors, selling as quick source of income and use in traditional rituals.

1.4.2. Information Gaps

From assessment of the background and available information on the indigenous poultry sub-sector in Kwale and Kilifi, and with reference to the ToRs of the value chain analysis, this study amalgamates qualitative and quantitative data to cover the following gaps;

- ❑ Sub-sector performance in terms of potential for income and employment generation.
- ❑ Value chain relationships and gross margins for different participants.
- ❑ Sub-sector constraints and opportunities including possibilities for business development services along the value chain.
- ❑ Projection in quantitative terms the likely returns or anticipated impact on the target community in terms of production, income and employment generation levels through investments in the development of the sub sector.
- ❑ Market demand measurements for indigenous poultry in destination markets compared to sources and source areas based on flow systems.

⁴ Interventions were focussed on exotic birds until the 1990s when some support was shifted to indigenous birds (Nyange, 2000).

⁵ Concerns of erosion of the indigenous gene bank exist and have remained significant concerns in the cockerel exchange programme.

2.0. VALUE CHAIN MAPPING – INDIGENOUS POULTRY

2.1. General Sub-sector Organisation

Ownership and management: Chicken ownership is not as straight as in cattle and shoats. There is an apparent diverse ownership; men, women and children. According to Njenga, men are the leading owners followed by women and then children at the ratio of 13:10:6 (Njenga, 2005). This is a reflective situation in the project area based on sample interviews and discussions held in three of the four divisions.

Poultry feeding: Based on previous research and the fieldwork conducted for this VCA, it is confirmed that indigenous chicken management as it is currently practiced is low-input based (Njue, 2003; Njenga, 2005 and Fowler, 2005). Chicken are basically left independent – on free-range to scavenge and look for food. Feeding the indigenous flock is simply a matter of choice and is often not planned for. A woman winnowing grains or threshing maize would end up shedding the leftovers that chicken will feed on.

Deliberate flock feeding is rare and where available, it is not planned for. In a number of times, it is accidental. Producers tended to either leave food leftovers and /or kitchen waste for chicken and dogs. There are no cases of supplemental feeding for indigenous chicken as it is reported that people lack enough to feed the families from the farms and therefore are not in a position to reserve or afford feeds.

Disease management: Watering of chicken is not generally planned for except when the owner places some herbs in water for medication purposes. This is mainly taking place during epidemics – red pepper, neem and fresh leaves of aloe *spp.* are crushed and put in a trough with water for the chicken. In addition, there is substantial application of self-administered drugs and pesticides. Use of aspirin, capsule-antibiotics (for human ailments), and non-conventional poisonous compounds such as *Power-Tab* for poultry ticks was reported. Consultations with veterinary officers are either absent or too limited.⁶ This is associated with three factors;

- Lack of knowledge among the poultry keepers on modern drugs availability for chicken disease management and availability of related services
- Inadequate resources to seek for veterinary advisory and related services
- Existence of traditional knowledge (though non-refereed) on poultry management through use of herbal medicine.

Housing: Less than 5% of the households have built dedicated pens for their flocks. On the other hand, the bulk of those keeping chicken shared their houses with the chicken – sleeping under the bed or in the kitchen. Little or no management and care is offered. Farmers tend to forget and assume the needs of their flock

Breeding: Stock breeding is left to chance hence no selective breeding is apparent, and /or practised except for rare cases in which informal breeders are involved. Inbreeding is common. No specific controls are employed. Households tend to borrow cocks from relatives and neighbours for breeding, an aspect that defeats any organised disease control initiatives. To built flocks, individuals buy pullets (though rare) or receive them as gifts from their kin.

Production and productivity: The average flock sizes in the two districts were varied; 7 and 16 for Kilifi and Kwale districts, respectively. The flock structure was rather migratory based on season and food /feed availability. Field interviews indicate that the flock structure has a ratio of 2:5:8 of

⁶ From 8 FGDs held over the period of data collection, a case in which veterinary officers were consulted was cited in one seating, and one VDO out of 15 incorporated.

cock to hen to chicks, a finding confirming the results of some previous work by Njenga. The average cock to hen ratio was 1 to 4.

Chicken were laying eggs three times a year with the eggs per chicken ranging from 11 to 15. Though hatchability was as high as 80%, chick mortalities ranged between 41.7% and 75% meaning that the survival rate is low. Mortalities are associated with predation, pests and diseases, hunger, and poor housing. Among the large birds, mortality is also reported though limited to about 10% to 20% and considerably higher during the extremely dry season. This generally illustrates significant losses during the growing period, which can be controlled or limited.

Marketing: Individual poultry keepers utilise 3 marketing nodes; at home, brokers either visiting on their own or when requested to come and buy chicken. During the market days for local periodic markets, poultry keepers have opportunities to sell to brokers who are positioned on the market access paths and /or to market traders based at the market. The tendency is to prefer and sell to brokers as this offloads the burden of taking the chicken and waiting for the market day.

Chicken prices are varied by chicken size, season and sex. The price determination mechanism is not by calibrated scale – there is a tendency to weigh by lifting and assessing by flesh composition of the chest.⁷ During harvest times, the prices are higher as a small proportion of households are willing to sell. This also coincides with the time when chicken are relatively healthy. The number of birds is high in the market during the dry period. Such times also coincide with disease outbreaks and severe food scarcity. Poultry keepers market their birds for two reasons – to address household financial needs, and if need be offload the flock so as to shift the mortality burden.

Selling of eggs from indigenous poultry is almost absent in Kwale and Kilifi. Eggs are also rarely consumed at home. The communities consider eggs as a stage of flock size development but not an end product.

2.2. Sub-sector Interactions

2.2.1. Overview

The indigenous poultry sub-sector in Kilifi and Kwale is considered a viable one especially in the arid and semi-arid areas where there are limited incomes. Especially in the 4 focus divisions in which CRSP (K) is operating, rains are unreliable and crop failure is a common occurrence. Consequently, food shortage and general poverty characterizes the population description. There is heavy dependency on relief food supplies from the government and other organizations such as NGOs. The sub-sector has clear potential for reversing the situation if special commitment between production and marketing chains is achieved. Currently, the sub-sector is contributing between 2% and 5% of household incomes and under a system of low input and free-range.⁸

The development of this sub-sector will impact on a number of fronts;

- ❑ Increasing and perhaps contributing to the demand gap of indigenous poultry meat in Mombasa, which is currently the main destination market
- ❑ Lowering the costs of production through increased flock sizes and hence providing competitive edge to trading patterns in which indigenous birds are sourced from far distances for the same market destination

⁷ See price details in Figure 2-3 and Annex 10.0.

⁸ Based on consultations with participants during FGDs and subject matter specialists in Kwale and Kilifi government offices

- ❑ Contributing to poverty reduction through increased earning from poultry sales hence playing a critical role in household food security and satisfaction of other financial resource demands
- ❑ Developing entrepreneurial skills and competences among the households as well as other players entering in the market to fill business service gaps within the emergent sub-sector.

Though trading and marketing activities start at the village level, designated days for periodic markets are useful in bulking and transportation of poultry. The table below shows the specific markets by their periodic operations.

Table 2-1: Periodic markets and market days

Days	Specific days	All days of the week
Monday	Mariakani	Mariakani, Likoni, Mombasa (Kongowea, Mackinnon Road and Majengo)
Tuesday	-	
Wednesday	Bamba	
Thursday	Kinango	
Friday	Guru Guru	
Saturday	Samburu	
Sunday	-	

Source; Field investigations, October 2005

During the market days, the flow of poultry varies by season and drought cycle. During times of food shortage, and schools' opening time, the number of chicken at the market increases to source for money and address various needs. However, this is the time when prices are depressed. During the harvest period, the poultry flow in the market is limited as the needs are fewer while the prices are significantly better. The table below illustrates random evaluation of chicken flows based on selected market visits over the survey period.

Table 2-2: Average poultry movements per market day⁹

Markets	Hens	Cocks	Total	Flow system notes
Kinango	175	75	250	Direct to Mombasa
Bamba	100	20	120	To MSA through Mariakani for collection of more birds; bulking numbers
Mariakani	140	60	200	Bulking point for Mombasa, local sales among consumers, and forwarding to Weighbridge
Samburu	340	110	450	Collection and sharing point for bulking in Mariakani and local sales, direct sales to MSA, Voi & Maungu, and Weighbridge

Source; Field investigations, October 2005

From the illustration, though on a single observation, Samburu and Kinango markets are significant by the numbers they handle. Strange enough, Kinango is served by a limited number of traders; there are 3 established poultry traders here, and control poultry trade in a division.

2.2.2. The Sub-sector Map

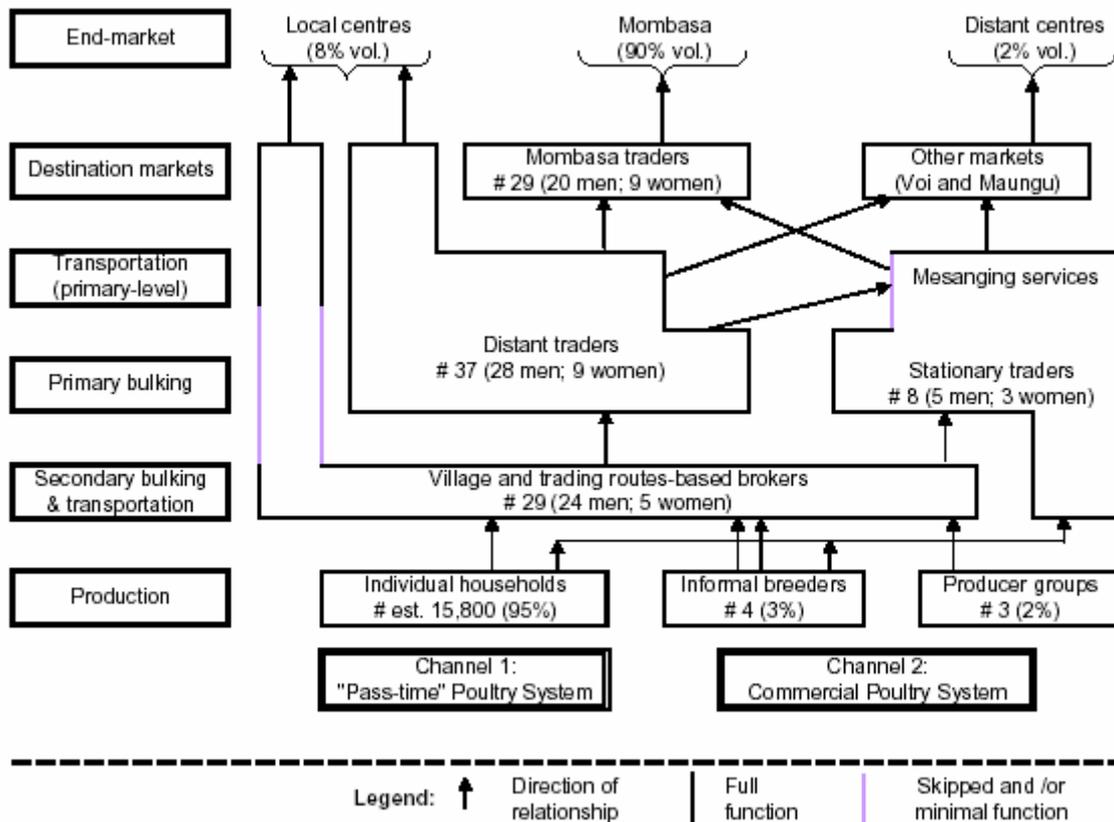
In March – April 2005 period, RED carried out a preliminary indigenous poultry sub-sector analysis covering Kilifi and Kwale districts in which valuable results were documented.¹⁰ Based

⁹ As observed and counted during random periodic market visits. These were also generally balanced as the average numbers based on discussions with various players.

¹⁰ Reference is made to the Workshop Reader for the Strategic Planning of RED, 10th – 12th May 2005: 75-92

on this output, the current analysis makes refinements of the emerging sub-sector map and provides detailed discussions illustrating new findings of flows through different channels from production to the markets. The map is divided between the different functions that are carried out in getting indigenous poultry from production end to the end-markets. The participants are divided into channels based on their forward and backward linkages and their use of technologies that differentiate them.

Figure 2-1: The indigenous poultry sub-sector map (Kilifi and Kwale)



Source; Field investigations, October 2005

2.2.3. Functions and Participants

The main functions identified in this sub-sector are production, secondary bulking, primary bulking, transportation, wholesaling and retailing. These are described in details below, along with the range of participants who fulfil the various functions.

A. Production

There are three differentiated categories of producers although they exist in the same environment and interact extensively. The main category is composed of individual households, followed by informal breeders and producer groups.

Individual households: As per the population estimates of 2003, the 116 villages have approximately 15,800 households. The role of women in poultry management is significant through provision of basic care. 95% of the poultry in the region is associated with this actor category. Overall, more than 90% of these households keep indigenous chicken. The poultry production systems are unfortunately rudimentary; free-range, low input-based and often 'semi-ignored' especially the management aspects. Of the households, less than 5% have

dedicated poultry pens meaning that there is a general tendency of housing the chicken and their chicks either in the kitchen or in the main house.

The current production system under this actor category illustrates limited flock numbers. On average, households keep between 7 and 16 birds, a factor associated with poor management practices and general neglect. However, the number is highly varied. The more arid regions of Bengoni and Karimani-Mweza have the smallest flock sizes per household while the highest are to be found in Kinango, Nzovuni, Mwaruphesa and Marondo, among others. Overall, less than 10% of households have more than 20 birds. Viable flock sizes of over 50 birds are kept by less than 2% of the households.

Poultry production at this level is simply a routine. The chicken are provided care as a last resort. For instance, less than 5% of the keepers bother to buy drugs and attend to significant threats of pests and diseases with substantial efforts. Red pepper, crushed and fresh aloe *spp.* leaves and neem in water are basically the main general ‘drugs’. Veterinary services are rarely sought for unless there is a general support programme to the sub-sector from the government or the NGOs.

Informal breeders: This actor category is quite limited though it is essential in the functionality of the sub-sector. It accounts for 3% of the poultry produced in the locality.¹¹ Its mushrooming importance is based on lessons and benefits at the individual level from the gains of the National Poultry Development Programme. About 15% to 20% of the incomes of informal breeders are generated from the poultry sub-sector. Currently, a quarter of the actor category is made up of women.

The actor category stands out as the most important; innovative, business-driven and presents basic structures for knowledge-sharing and peer training contact in poultry management. It manages poultry through a blend of traditional and modern approaches; the flock sizes range between 40 and 100 birds (with an average of 65 birds). Other important traits include;

- Separate housing for poultry
- Breed selection and improvements for better birds
- Selective selling based on size, purpose and timing
- Constant inspection for possible ailments of chicken
- Feed supplementation – mainly with local materials such as crushed grains and bran
- Drugs use, and occasional vaccination (though generally minimal)
- Marketing of pullets to neighbouring farmers for improved poultry stock.

The level of knowledge on poultry management is refined. Poultry production is rather a business than routine – with sales happening on a monthly basis. However, markets are still unreliable and unpredictable due to price fluctuations. Brokers still form the main buyers – taking 85% of the birds from this category – it is apparent that other producers are yet to take advantage of this opportunity and learn to improve their poultry management practices for economies of scale and improved earnings.

The actor category holds potential in supporting the development of the sub-sector in general by acting as an extension point and demonstration unit for the households interested in pursuing poultry keeping business. The actor category has two market ends; brokers and neighbouring producers interested in pullets.

¹¹ During the survey, only 4 informal breeders were identified while the field team had an opportunity to meet one and infer on another based on the production activities and successes in the enterprise.

Producer groups: This actor category is at its formative stages and currently accounts for 2% of the poultry produced in the locality.¹² Producer groups currently keep group poultry at the household level. The role of the group is to share management knowledge and skills for improved productivity. Little is known of the actor category though its existence is authenticated. Its potential is appreciated through information exchange, potentials for guarantee in accessing and repayment of credit, social encouragement in the enterprise, and creation of economies of scale to attract bulk traders for poultry purchasing purposes.

For the three actor categories, there are common /shared aspects;

- ❑ Marketing links and relationships exist between the producers and brokers. A number of the brokers are part of the producer community. Pricing per chicken is varied depending on the season, month of the year, size and sex (hen or cock). For a hen, the farm-gate price ranges from Kshs. 50.00 to 80.00 (with an average of Kshs. 65.00) while for a cock it ranges between Kshs. 80.00 and 120.00 (with an average of Kshs. 110.00).
- ❑ There are no significant value-addition efforts.¹³ There is little effort to support the sub-sector such as improving the breeds. There is also no evidence of cross-fertilisation of management knowledge between and among the households and different actor categories.
- ❑ Currently, the critical threats /challenges to the production efforts are;
 - Pests, diseases, and predation. The main diseases include Newcastle disease, chronic respiratory disease and infectious coryza.
 - Inadequate feeds as the poultry has to feed freely. Rarely is there surplus to feed the chicken. About 20% of the feeds are made up of kitchen waste that poultry has to compete unfavourably with pets such as dogs at the household level
 - Limited management knowledge and expertise – related to care, and disease control
 - Lack of markets and marketing information – a greater proportion of the production hubs are located away from important markets and therefore it is uneconomical for the actor categories, except informal breeders in pullets’ selling to directly interact with dynamics markets.
 - Trading relationships exist and are established with brokers whose pricing is less competitive and less responsive of the production costs.

B. Secondary Bulking and Transportation

95% of poultry reaching distant and other traders in Kilifi and Kwale districts passes through brokers – and are considered as critical market links that can be used in establishing business service delivery to the producers.

During the survey, and based on the various centres and discussions held, 29 brokers were identified of whom 24 were men (82.8%) and 5 women (17.2%). Brokerage in poultry marketing is relatively involving and therefore does not present a good opportunity for enhancement and entry of women.

There are two actor categories involved in secondary bulking and transportation. However, quite often, the players overlap in their roles making it difficult to differentiate them. The two levels are; village-based brokers, and trading routes-operating brokers. Their roles are similar though there are a number of distinctions.

¹² Only 2 groups were identified in Kaloleni Division – supported through an NGO operating in the region to address rural poverty.

¹³ Though by local standards, informal breeders actively carry out breed selection, consistent care and often specialise in selling pullets to individual keepers for flock improvements.

Village-based brokers: This sub-category is made up of the local population living within the villages where poultry farmers are. Their tools of trade are a bicycle, a crib and a housing pen at their homes. Village-based brokers serve limited number of periodic markets, often between one and two. In addition, each one of them is associated and linked to an individual trader who visits a particular market during a designated day in a week when auctions take place.

During the period that the brokers are not in the periodic market, they move from one household to the other in search of those willing to sell their chicken. Since the locals also know the brokers, quite often they are invited to the homes of the poultry keepers to buy chicken. Price determination in the poultry business is subjective; no weighing scales are used.

About 90% of this category involved in bulking of chicken in their homes awaiting to deliver to the market during the market day and /or meeting the contact trader as per informal business arrangements. On average, these brokers handle between 8 and 17 chicken per market day and their average purchase price per chicken is Kshs. 65.00 (for a hen) and Kshs. 110.00 (for a cock).

For brokers enjoying established relations with traders, informal credit arrangements exist. Though, such arrangements occur with pre-determined prices for the chicken bought in the villages. Other conditions are that all the chicken that the broker handles is exclusively on behalf of the collaborating trader. No formal records for such relationships are documented while these transactions are based on personal trust and developed trading relationships over time.

Trading routes-based brokers: This sub-category is made up itinerant traders only visible during periodic market days. The sub-category is highly mobile and during a greater part of the business active time operates between 100 metres and a kilometre from the main market centre. These brokers offload poultry from individual producers visiting the market and quite rarely bulk from village-based brokers (especially those new in the business). Again, their operations are facilitated by use of bicycles and cribs – though this is common among 60% of the operators while the rest operate on foot.

The business tendency of this category of brokers is to be highly mobile along different routes. During the market days, brokers start their business as early as 7.00am and position themselves on the market entry routes. Compared to the village-based operators, their price quotation is relatively lower as they;

- Lack assured market
- Do not enjoy or have access to any form of pre-financing mechanisms
- Are not sure about the market dynamics and possible market prices.

For brokers in general, the issues of value to this analysis are that;

- The marketing channel is still affected by mortalities that negatively affect the business – due to poor transportation management, and diseases, among others.
- The close relations and links especially for the village-based brokers to the producers could be used for piping embedded service provisions, while with the traders, there are opportunities for strengthening credit provision and guarantees for repayment.
- By knowing market expectations in terms of sizes and other specific requirements, brokers are better placed to support information provision at the production level towards improving quality production of indigenous poultry.

- ❑ Brokers are responsible for secondary bulking and transportation of the birds from the source areas to the market and therefore spare the distant traders the business agony of looking for chicken in the interior. They also act as ‘market connectors’ for and on behalf of producers.

C. Primary Bulking

Nearly all the primary bulking service is provided by brokers. This ensures that traders concentrate efforts on selecting, paying for and arranging for transport of the poultry to the next market. Of the 5 primary markets in the region, 4 were visited in which 45 traders were identified (73.3% - men; 26.7% - women).¹⁴ This form of trade is less involving though it is limited by capitalization and presents significant opportunities for women.

The poultry prices range between Kshs. 100.00 and 135.00 for a hen and Kshs. 150.00 and 190.00 for a cock. Market costs for those in primary bulking are comparatively higher than those actor categories below. Emerging costs include purchase of feeds, transport permit (at a cost of Kshs. 1.00 per chicken), loading charges, among others.

Two actor sub-categories were identified; distant traders and stationary traders – with differentiated operations structure and arrangements. Though, both sub-categories rely on brokers to collect and offload chicken before transporting to market destinations.

Distant traders: From the field results, this category has 37 operators (75.7% - men; 24.3% - women). On average, each trader is served by 1.3 brokers. The traders operate in selective markets as dictated by the periodic market days (refer to Table 2-1). Traders are rather selective on the markets they visit and this is dictated by;

- Status of competition – how many other traders go to the same market
- The general flow and reliability of poultry getting into the market
- Availability and cost of transport to the destination markets
- Availability of market intermediaries to support secondary bulking of the chicken – in form of broker.

In order to enjoy economies of scale, distant traders target over 50 chicken for a single delivery. However, some markets have lower volumes and present a challenge in this respect. Such include Bamba. Where feasible, traders prefer to combine markets for better volumes through semi-bulking and utilisation of self-constructed transit pens. This is apparent for traders frequenting Bamba and having Mombasa as the primary market. Such traders have transit pens in Mariakani while those operating in Guru Guru and Kinango also retain and utilise bulking transit pens in Kinango.

Distant traders allocate a single day for a single market. They however, depending on the distance to the destination market and availability of transport, develop some basic infrastructure for handling the poultry bought. For instance, traders frequenting Kinango have developed small transit pens in which they keep chicken after buying and also feed them there. By devoting two days based on the setting of the periodic market days for the two centres, the traders are in a position to lower trading costs and increase their trade volumes and incomes. In Samburu, traders do not have transit pens as the market is well served by the Nairobi – Mombasa road, and the chicken volumes are significantly higher compared to other markets (see Table 2-2).

¹⁴ Numbers of traders are high due to repeated counts associated with centres of operation. Two traders met in Bamba were also counted in Mariakani and Samburu while 4 identified in Mariakani were also met in Samburu.

Stationary traders: This sub-category had a limited number of operators and was mainly made up of poultry traders who have over 15 years in the poultry trade. Those in the sub-category were 8 operators (62.5% - men; 37.5% - women). Quite often, this presented itself as a family activity rather than core business of a single player. Apart from 3 operators in Mariakani, the rest of the operators carried out the business within the family plot and anyone at home could handle chicken delivered.

The supply of chicken to this sub-category is from two core sources; brokers (of the two types – accounting for 60% of poultry delivered), individual producers – including households and informal breeders (accounting for 40% of poultry delivery). Stationary traders have extensive operations knowledge of the poultry business as a result of many years of involvement. They have established stable contacts for supply and delivery and therefore mainly function as ‘large stockists’. These traders rarely move to the markets. They are also well known locally and in the market channel.

Overall though the costs of trading and business mark-ups have been generated in this report for traders broadly covering primary bulking, it is apparent that the profit margins are better for stationary traders compared to distant traders. Their levels of business input are low and also have capacities to handle large volumes. Before delivery, these traders target above 80 birds and make limited trips to market destinations in Mombasa and Voi.

The common issues among the distant and stationary traders are;

- ❑ Pests and diseases are responsible for volatile performance of the business. Traders have limited capacities to disease identification and often face mortalities of 1% to 2% of the stock. Apart from diseases, transit stress is a factor to consider, leading to stock rejection by destination market operators.
- ❑ Attaining economical volumes per market per trader is emerging as a limitation – as a result of excessive competition especially for markets enjoying better transport network and connectivity such as Mariakani and Samburu.
- ❑ Traders suffer from low capitalization. Though poultry flow in the market is limited and therefore traders are incapacitated by the low numbers to cover demand in market destinations, inadequate financial capacities further lower their capability to access other source markets.
- ❑ The local government support to the business is quite limited – traders do not have access to relevant services and infrastructure to facilitate smooth business flow yet they still pay for permits.
- ❑ The costs of poultry trade at the trader level are limiting and consuming a greater proportion of the profit margin.¹⁵
- ❑ Technology in the handling facilities such as cribs is poor and this is responsible for injuries suffered by the chicken, and is likely to explain for notable mortalities.

D. Transportation and Wholesaling

Between primary bulking and wholesaling, traders are involved in transporting the stock. Depending on the source market, transport costs vary though the cost per bird from one market to the other within Kilifi – Kwale – Mombasa triangle is standardized at Kshs. 2.00. Trader fares are however varied and influence the profit margin depending on locality, connectivity and /or distances. Below is a Table showing details on trader fares for market connection by public means.

¹⁵ This is significantly the case in smaller markets such as Bamba. It is not surprising that the number of traders frequenting smaller markets as compared to Kinango and Samburu is highly varied and often small. For every 1 trader visiting Bamba, there are 2 in Guru Guru, 5 in Mariakani, 9 in Samburu and 1.5 in Kinango.

Table 2-3: Trader fare differentiations for selected market connections

Return journey	Fare (Kshs.) ¹⁶	Additional trade considerations
Mariakani - <u>Mombasa</u> - Mariakani	140.00	<ul style="list-style-type: none"> Ferrying the cribs from stage using a hand-cart to the selected market attracts additional costs depending on the number of cribs or poultry
Mariakani - <u>Bamba</u> - Mariakani	200.00	<ul style="list-style-type: none"> None
Mariakani - <u>Samburu</u> - Mariakani	100.00	<ul style="list-style-type: none"> Costs of hand-cart or bicycle transport from the market to the roadside
Kinango - <u>Mombasa</u> - Kinango	260.00	<ul style="list-style-type: none"> There are loading and off-loading costs payable to casuals Hand-cart is required to cross the ferry as well as deliver the chicken from stage to the selected market in the town

Note: The underlined centre is the focus destination for the return journeys illustrated

Source; Field investigations, October 2005

For stationary traders, messaging service in which these traders either liaise with a vehicle to deliver to the market or give the flock to another trader en-route is common. The strategy is also used by distant traders through combining their stocks and having one of them deliver to the market destination.

Traders delivering stock to destination markets in Mombasa prefer to offload by wholesaling. Though, wholesale here should be understood under a different operational definition; all the chicken delivered by a single trader are offloaded at once to a single market-based trader. The purchase prices range from Kshs. 190.00 to 250.00 for a hen (at an average price of Kshs. 220.00) and Kshs. 250.00 to 270.00 for a cock (at average price of Kshs. 260.00). On a single offload, the market-based traders target 60 to 130 birds. Deliveries take place 1 to 3 times a week. On average, one market trader depends on 2 to 4 distant /stationery traders.

E. Retailing

This is the key function in the entire sub-sector that makes the business work. This involves selling in single units to individuals and institutions. However, though it is a common practice, 70% of the distant and stationary traders do not practice it as they bulk chicken on behalf of traders in Mombasa and therefore have entered in some informal arrangements to support the supply process. The actors involved in retailing and their roles are described below;

Distant traders: There is limited interest among the distant traders to engage in retailing. Though, in Mariakani, this is a common practice at the bulking point. There are 7 traders with pens in the locality with each selling on average 8 birds per day. Of the 8, about 40% are bought by hotels and bars while the rest are bought by individuals. Depending on need /request, the traders slaughter the birds for the customer though appropriate facilities are not available.

Trading routes-based brokers: The main targets for this category of brokers are distant and stationary traders. Though, by request, they sell in single units as well.

Roadside poultry traders: The practice of roadside trading is only evident in Mariakani (of the areas visited during the data collection period). Though this is considered illegal by the town council /authorities, the business runs intermittently. Three regular traders were identified. Normally, these traders trade in live chicken and on average, each offloads 3 to 9 birds per day. Kshs. 190.00 to 250.00 for a hen (at an average price of Kshs. 220.00) and Kshs. 250.00 to

¹⁶ A single journey is half of the charge

270.00 for a cock (at average price of Kshs. 260.00) are the regular prices. No slaughtering is done at this point.

Destination markets-based traders: Only two markets were visited in Mombasa – Mackinnon Road and Majengo, in which 29 traders were recorded (20 men; 9 women).¹⁷ This is the last stage of the value chain in which live chicken can be traced. Owing to the build-up of transactional costs, the price of live chicken is the highest at this point; averaging Kshs. 260.00 for a hen and Kshs. 350.00 for a cock. Value-added services depending on the needs are provided as well such as slaughtering and packaging. The two markets have approved slaughterhouses privately operated and in which the traders can arrange for the service. Traders at this point serve individuals as well as hotels, and some of them have supply contracts. On average, a trader sells 6 to 14 birds a day. However, some seasons are generally poor especially during the month of Ramadhan when sales fall substantially.¹⁸

From the transactional activities involving the trading hierarchies, there is an evident pattern of market relationships and dependability. The illustration below outlines these interactions and associations.

Figure 2-2: Market relationships and dependability

Trade hierarchy	Numbers	Scale (vol. of birds)	Transactions /deliveries per week
Market trader	1	60 - 130	1 - 3
Distant /stationary trader	2 - 4	50 - 80	2
Broker	1.3	8 - 17	5
Households /sources	12,154	*	7

* Numbers sold per household are varied by season, among other factors

Source; Field investigations, October 2005

2.2.4. The Channels

The sub-sector demonstrates the linkages between the different actors whose roles and functions are described in the relevant section. Two distinct channels (as illustrated in the sub-sector map) flow from the analysis: the ‘pass-time’ poultry production channel and the commercial poultry production channel. Each of these channels has specific characteristics about the way it operates, though there is significant overlap.

A. Channel One – ‘Pass-time’ Poultry Production

In channel one, poultry production is one of the activities that households have to engage in to be *full*. The practice is not carried out because of its commercial purpose, value or viability. Chicken are kept for stew of the visitor. At times of financial need and in a situation when alternatives are limited, chicken is sold.

There are no efforts put by the households to improve the quality of the breed /flock. Inputs to the sub-sector are considerably limited and in most cases are not accounted for. For instance,

¹⁷ The number varies significantly from previous observations as recorded in a previous survey.

¹⁸ This survey was carried out during the holy month of Ramadhan a time when sales per trader per day fell to below 6 birds.

feeding is just by chance. The market chain is less defined in which case trade is mainly controlled by brokers visiting homes to determine whether there is stock for disposal. At the same time, producers are not sensitized to market developments and /or changes in demand.

Though this channel accounts for about 95% of the birds produced in the region, and harbours the greatest opportunities for growth, it is in the weakest state of self-realisation. Further, the channel is potentially the most important vehicle in addressing rural poverty and entrepreneurial spirit for income generation. Various actors such as brokers are well positioned to participate in relevant interventions related to training, information dissemination, addressing poultry sector diseases, among others. Addressing production level constraints through this channel presents the shortest approach though it is likely to be more expensive as opportunities for commercial BDS are limited and would require a significant period of time and resources to stimulate the processes and action.

B. Channel Two – Commercial Poultry Production

In channel two, poultry production is emerging as a commercial opportunity that among others can be used for income generation. Particular efforts to support the channel are based on self-realisation, lessons from previous interventions, and current efforts by development agencies to identify and support sustainable livelihood systems. Producer groups and leading individual poultry keepers are the main lights.

Though the efforts to identify and provide necessary sub-sector inputs are not fully realised, significant development are notable. There is significant application of better breeds, housing for chicken, improved care of chicks, selective selling, and use of recommended drugs to reduce mortalities. Where drugs are not used, producers carry out thorough inspections and use herbs in a consistent manner.

This channel, though known for its standing-out characteristics is not comprehensively developed. Except for quality production practices and higher flock numbers per capita, the market organization still relies on brokers. Poultry prices are not better as compared to Channel One. What is significant are the organised frequency of sales, higher numbers of offloaded chicken and the commercial practice as well as the general organization of the channel.

Currently, the channel controls 5% of the bird numbers in the region. It is organized around lead /contact farmers and emerging producer groups. The potential of this channel lies in enterprise leadership and demonstration of best practices in poultry production. Players in this channel can better be used as farmer field schools and centres for exchange visits. In particular, using producer groups as marketing structures is an opportunity through which BDS can be activated. At the same time, producer groups and depending on the way they are organized and operate could be used for testing and marketing inputs, spearheading testing of provision mechanisms and running input guarantee schemes for improving production.

2.3. VCA Mapping

2.3.1. Analysis and Deductions

A value chain analysis of the indigenous poultry sub-sector identifies 5 market stages at which transactions take place. The VCA concentrates purely on live birds and disaggregates hens and cocks to illustrate comparable trade margins.¹⁹

¹⁹ The term margin is used in this document to refer to a gross gain from which the individual trader's costs are computed and deducted to arrive at a net margin

The poultry market chain is organized around 5 market hierarchies. These hierarchies are comparable to the functions identified in the sub-sector map and analysis. At each of these points, mean poultry price vary by type.

Figure 2-3: VCA of the indigenous poultry marketing²⁰

Market hierarchy	Type	Buying Price (Kshs.)	Selling Price (Kshs.)	Gross Margin (Kshs.)	Trans. Costs (Kshs.)	Net Margin (Kshs.)	% Return	% value*	% market price ⁺
Production end	Hen	56.00	65.00	9.00	0	9.00	16.1	25.0	3.5
	Cock	56.00	110.00	54.00	0	54.00	96.4	31.4	15.4
Brokering point (lowest market end)	Hen	65.00	100.00	35.00	13.00	22.00	33.8	38.5	13.5
	Cock	110.00	150.00	40.00	13.00	27.00	24.5	42.9	11.4
Source /tertiary markets (smallest; Bamba)	Hen	100.00	135.00	35.00	31.30	3.70	3.7	51.9	13.5
	Cock	150.00	190.00	40.00	31.30	8.70	5.8	54.3	11.4
Secondary markets (Kinango, Guru Guru, Samburu, Mariakani)	Hen	135.00	220.00	85.00	20.00	65.00	48.1	84.6	32.7
	Cock	190.00	260.00	70.00	20.00	50.00	26.3	74.3	20.0
Primary /terminal markets (Likoni, Weighbridge, Mombasa)	Hen	220.00	260.00	40.00	27.80	12.20	5.5	100.0	15.4
	Cock	260.00	350.00	90.00	27.80	62.20	23.9	100.0	25.7

Notes: * = % of terminal price value
+ = % of net margin over terminal market price

Source; Field investigations, October 2005

The hierarchies are;

- ❑ *Production end*: This is the breeding point where the actor categories are poultry producers. Individual households form the bulk of the players.
- ❑ *Brokering point*: There are two points at which poultry brokerage is taking place – at the production end and along the routes leading to the periodic markets. Brokers form the basic bridges between the poultry farmers /producers and traders. Their significance is in secondary bulking.
- ❑ *Tertiary markets*: These markets are the lowest in general ranking. They are placed at this level depending on the number of traders visiting and general poultry volumes. Based on the survey, only Bamba was ranked as a tertiary market. Poultry numbers are significantly low to attract competitive trading and trader involvement.
- ❑ *Secondary markets*: These markets form the critical nodes for primary bulking of chicken numbers. Trader numbers exceeded 3 per centre and ranged between 4 and 18. The two sub-categories of brokers were also represented with heavy activity. Intense chicken trading tended to occur between 8.00am and 11.00am. Centres within this hierarchy

²⁰ At the production end, Buying Price should be understood as estimated production costs for an average of 7 months per bird. All costs are computed at this point. In the illustration (based on detailed costs computation), production costs for a hen and a cock are uniform under a free-range /low-input system. See Annex 10.0 for details on the considerations for developing the margins.

handled over 200 birds per market day and included Kinango, Guru Guru, Samburu, and Mariakani.

- *Primary /terminal markets:* These formed the focus end markets targeted by distant and stationary traders. Of importance to consider is not the size but the destination. Markets of this category were determined by trader interests. Of particular mention are three market points in Mombasa (Mackinnon Road, Majengo and Kongowea), Voi and Maungu, and Likoni. To some extent, Mariakani also belongs to and doubles in this category.

The main points arising from the above analysis are as follows;

- Cocks attract a higher return along the marketing chain compared to hens yet only 26% of the birds marketed are cocks. By enhancing care and management practices to increase survival of cockerels, farmers are better placed to increase their income from poultry.
- Among different categories of traders, brokers have a significant margin from poultry trade, a factor associated with low input in the enterprise and tough negotiation for favourable pricing. Brokerage is a service with minimal risks and inputs.
- Tertiary markets are less lucrative points of trade as average returns /trading margins are minimal.
- Poultry producers receive only 18% of the mean terminal market price in Mombasa. Traders justify this in relation to the transactional costs that they incur along the market chain. In addition, there are various categories of traders between the poultry producers and the terminal market leading to significant change of hands.
- Along the chain, there are no traders operating or directly sourcing poultry from the farmers and selling directly to the terminal distant markets due to distances and bulking processes. Though, there is minimal exception in operations of some brokers marketing directly to local markets (see Figure 2-1 for clarifications).
- Analysis of whether traders make inordinate margins in the chain is complicated. Poultry producers are often disadvantaged through lack of market orientation. They are also quite a distance from vibrant markets. Producers have to sell poultry as a last resort to raise cash for immediate needs and therefore are in a weak bargaining position and lack current information about markets and market trends.
- There is lack of proper and transparent mechanisms of price determination since the mechanisms used are subjective and highly depend on the buyer's assessment.

2.3.2. Non-exploited Functions and Roles - Opportunities

A thorough review of the sub-sector map and emergent interactions show that a number of services that can improve the production and marketing ends. Some of these are weak, unexplored and /or non-existent. These include extension services, inputs supply and management, breeder services, meat processing and marketing, production and marketing of organic manure (with adoption of viable flocks). For the purpose of this survey, meat processing and marketing are not discussed since they are considered beyond the scope of this analysis and report.

Extension services: Though poultry production has a long history in the region, commercialization is almost absent except for a few farmers borrowing experience from previous support programmes. The weakest point within the overall sub-sector and the VCA in general is the production end. With economic liberalisation, extension services in agriculture and livestock have declined over the years. In the poultry sub-sector and particularly within the region, there is no existing formal and publicized extension service provision except for the role played by the

Farmer Field Schools especially in Kwale, previously supported by Kwale Agricultural Project (KWAP).

There are lead local breeders well positioned as potential extension service providers. Currently, such farmers engage in informal service provision at no charge. The actor category has potential to offload this service and deliver it commercially, especially through an embedded mechanism. Through sales of pullets and ‘after-sales’ support, significant extension role can be assumed by these ‘leaders’ on a sustainable basis. With training and appropriate support towards positioning in service provision, brokers have a significant potential to provide supportive extension services as well since they maintain valued contacts with producers through their interactions in poultry marketing.

Input supply and management: Consistent and commercial-oriented knowledge to indigenous poultry is inadequate among the local poultry producers. Information about essential inputs, their application and use is not locally available yet there are a number of agro-vet shops and stockists in the local centres, including Mariakani, Kinango, Samburu and Kaloleni. In addition, there are micro-finance agencies serving the focus population.

Existing agro-vet stockists have a role in facilitating commercialization of indigenous poultry sub-sector by stocking relevant inputs as well as working in close collaboration with manufacturers of the inputs to conduct demonstrations and field days to the local producers. This way, demand for the inputs can be increased while the demonstrations are supported in an embedded manner.

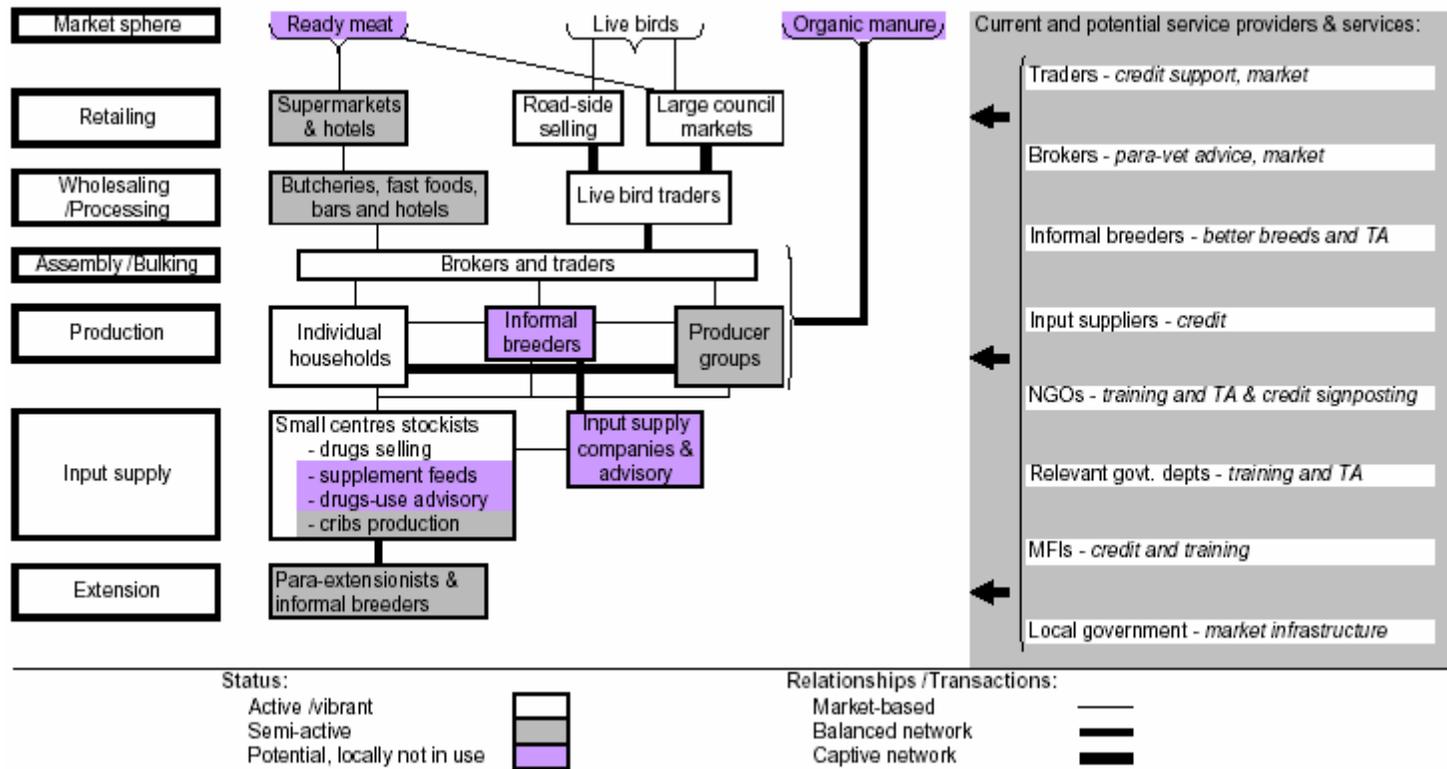
Commercial production of cheap and locally available feeds supplements is absent. Using local knowledge and materials, there are opportunities among women to participate in production of such feeds and marketing. However, input from research institutions and support from FFS would be essential. In addition, better quality cribs can be identified and produced locally and commercially for use in transportation.

Breeds improvement service: Productivity of the poultry breeds currently available in the region is good. However, farmers devote little effort in quality birds’ selection and breeding. Lead producers acting as local breeders can enhance their business through providing selective breeding, quality control and marketing of better pullets and cockerels to producer groups and individual farmers.

Sub-sector supplementation: Of special consideration here are inherent opportunities for poultry producers to engage in;

- Production and marketing of organic manure
- Developing eggs selling as a business opportunity.

Figure 2-3: Value chain flows - current status and opportunities



Source; Field investigations, October 2005

3.0. GENERAL ENVIRONMENT

3.1. Market Trends and Competitiveness

In Kenya in general, there is significant competition in poultry meat supply, consumption, and preference between indigenous and exotic birds. In large towns and cities in particular, consumption of exotic birds is more than 5 times that of indigenous poultry. The trend is mainly observable from fast food cafes that serve grilled chicken and potato chips.²¹ Significant consumption of indigenous chicken is reported in bars and restaurants – for soup-based recipes and based on special requests from the customers. The birds are also preferred by individuals buying from open markets for home consumption.

3.1.1. Unmet Demand

The trading flow patterns of indigenous poultry in the region illustrate both ‘imports’ and ‘exports’;

- ❑ Exports – the 116 villages of interest to CRSP (K) produce poultry. Marketing of poultry takes places at the household level (production), Brokering point (lowest market end), Source /tertiary markets, Secondary markets, Primary /end-markets. The main consumer points are Mombasa (taking 90% of the marketed stock), local centres such as Mariakani, Weighbridge, Mazeras, Kinango and Kaloleni (taking 8%), and distant markets such as Voi and Maungu (taking 2%). The fact that 92% of the poultry sold is consumed outside the two districts is an indication of viable ‘export’ opportunities.
- ❑ Imports en-route – Though the two districts are important producers of poultry, the capacity and ability to satisfy demand especially of the Mombasa market is limited. Currently, 45% of indigenous poultry consumed in Mombasa come from Kitui and Makueni while only 55% of the poultry come from Coast Province. Of the 55%, of which 90% come from the two districts. There is hence a significant supply gap. To cover the demand gap, there is chicken trading flow from distant sources while the two districts have potentials to take advantage of.

3.1.2. Growth Potentials in Indigenous Poultry Production

Presently the state of commercialisation of indigenous poultry production is below 30% while nearly every household is involved in traditional poultry keeping. Capacity to own and manage a minimum viable flock of 50 birds exists. By the end of September 2005, the 4 divisions were estimated to have a population of about 400,000 indigenous chicken. The minimum number for the break-even point for the region is 790,000. To achieve this, it will require households to increase its current stock by about 50% through a combination of approaches such as;

- ❑ Buying high quality and adaptable breeds
- ❑ Adopting current and suitable flock management practices such as proper housing and supplementary feeding
- ❑ Carrying out selective and graduating marketing
- ❑ Developing learning interest and business principles on poultry sub-sector.
- ❑ Establishing and maintaining market relationships with traders
- ❑ Sourcing and taking advantage of value-adding extension services mainly provided through an embedded approach.

The fact that Mombasa, which is the main market for indigenous poultry has its supply supplemented from distant sources such as Kitui and Makueni is adequate testimony of indicative production growth potentials. Currently, some lead farmers are acting as

²¹ Consultations with 2 popular eating points in Mariakani confirm the situation. Fast food cafes prefer broilers as they are tender, finely selected and easy to prepare.

demonstration centres through which peers can learn on improved production systems. Limited income generation options is also motivating farmers to some degree to leaning towards the sub-sector.

Availability and requirements for minimal space at the household level, minimal financial capital input and possibilities of acquiring chicken based on familial ties and kinship highlight presence of supportive and favourable factors of production. In addition, current marketing arrangements where village-based brokers work closely with entrenched traders is a further motivation safety in entry into the sub-sector.

3.1.3. State of Value-addition

The sub-sector is quite rural and less dynamic. It suffers from static pricing as value-addition opportunities have not been extensively taken advantage of. Others do not translate to better returns if exploited. The illustration below highlights the state of value-addition and extent as well as potential opportunities that can enhance competitiveness and ranking.

Table 3-1: Status of value-addition

Node	Current practice and state	Potential opportunity
Production*	<ul style="list-style-type: none"> Use of relevant inputs such as poultry drugs (though limited) Erection of poultry dedicated pens Selective breeding and marketing 	<ul style="list-style-type: none"> Quasi-extension services provision on a peer to peer scale Viable flocks and adoption of poultry keeping as a business (including limited supplementation in feeding)
Brokerage	<ul style="list-style-type: none"> Semi-fattening processes (often not exceeding a week) 	<ul style="list-style-type: none"> Commercial fattening (based on simple approach and better care) Provision of embedded extension services and management information to producers Use of better and upgraded cribs for transportation
Local Authority	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Erection of marketing sheds and transit pens for hire Support on quarantine management
Input suppliers and stockists	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Aggressive marketing of inputs through open days organised in collaboration with informal breeders Vaccination services – working through and in partnership with Livestock Officers for farmers' contacting
Trading	<ul style="list-style-type: none"> Slaughter and packaging services (limited to approved sites) Customer delivery (minimal and often based on institutional purchase arrangements) Credit provision to supplier 	<ul style="list-style-type: none"> Feeding back of diseases and pests Credit guarantee schemes to brokers and supplying traders

Note: * = only noticeable among informal breeders

Source; Field investigations, October 2005

3.1.4. Threat to Market Competitiveness

As already indicated elsewhere, though market for poultry exists, consumption of indigenous birds faces competition from the exotic flock. Except for soup-based recipes and personal request,

the greater consumer segment is that of exotic species. Fast food cafes prefer exotic breeds. It is individual consumers, bars and restaurants that are behind the peaking demand for indigenous poultry.

Various diseases in the background of poor poultry management systems present a threat to overall production. This analysis was actually carried out at a time when a worldwide alert on bird flu had been sounded. The fact that local producers at the village level are yet to adopt better production approaches present a significant threat to the sector. Traditional and varied cultural practices such as the use of chicken for certain rites and rituals among the Miji-Kenda community are an opportunity of transmitting diseases and pests from one locality to another. Quarantines around poultry diseases are rarely effected and respected – due to late realisation of the threats and unnoticeable epidemic transmission systems.

Prices for poultry are unlikely to improve at the producer level. Basically, no price changes are likely to occur since the general and current trading arrangements are expected to continue. Relations so far developed between traders and brokers are expected to dominate the market arena. Since the target market remains to be Mombasa and the neighbouring towns, the current cost structures will remain valid. Based on the economic principles of supply and demand, the price per capita is likely to go down through the economies of scale enjoyed by traders on bulk collection. The same is likely to spread or trickle to the producers.

3.1.5. Income and Employment Generation

It is apparent that indigenous poultry presents a rescue plan for the rural households in the two districts. Though it is difficult to compute the potential income, stable flocks of 50 plus birds are considered economic – with a ratio of 4 hens to 1 cockerel. Conservatively, from a flock of 50 birds in which 40 are female and with survival rate of ten chicks (to maturity with improved management) per clutch, a household is in a position to make sale of Kshs. 39,375.00 per year at an average sale price of Kshs. 87.50 per bird. With such abilities, this implies that such a household is generating close to Kshs. 3,500.00 per month from poultry alone.

3.1.6. Willingness and Abilities to Pay for Services

Commercial services in poultry sub-sector are non-existence. The sector is at a rudimentary state while state of knowledge of income-generation potentials is low. Producers are aware of the value of vaccination in checking diseases and consequent mortalities. Of the sites visited, only 3 out of 15 (representing 20%) had ever used vaccination services – though generally subsidised.

The willingness to pay for services related to the sub-sector is remote. This situation is associated with lack of information and trust on available alternatives such as neem, aloe, hot pepper, among others. Abilities to pay at individual level are also minimal. The state of poverty is highly visible. The demand and mobilisation for payment of related services at a village level is more viable while the same approach lowers the cost of service per individual. With the take-off of the sub-sector, a commercial approach will guarantee payment for services at a village, rather than on an individual level in the short run. Marketing such services should therefore be well targeted.

3.2. Governance and Regulatory Environment

There are limited governance and regulatory issues around the indigenous poultry sub-sector. As already identified in a previous study (see Fowler, 2005), they are;

- Movement permits for distant traders
- Health /hygiene inspection – this is minimal and rare for poultry though it is stringent in the two registered poultry slaughterhouse in Mombasa

- Disease surveillance and quarantine imposition – surveillance is managed through inspections carried in the two slaughterhouses in Mombasa. However, imposing and managing quarantine is rather difficult owing to undetected movements based on kin and familial networks
- Buying high quality and adaptable breeds
- Significant government support in programming and sub-sector inputs.

3.3. Current Constraints

The indigenous poultry sub-sector is faced by a number of constraints at different levels. During the survey, these constraints were authenticated through FGDs and expert consultations.²² In this section, the constraints are categorized appropriately.

Table 3-1: Sub-sector constraints

Category /level	Constraints
Production	<ul style="list-style-type: none"> <input type="checkbox"/> High incidence of diseases – the main one being New Castle (<i>Kideri</i>) <input type="checkbox"/> High mortality rates especially for the chicks – associated with predation, poor housing and inadequate feed <input type="checkbox"/> Limited market information due to distance hence curtailing access <input type="checkbox"/> Theft of birds at the village level <input type="checkbox"/> General poor prices and pricing structure for chicken <input type="checkbox"/> Limited breeding knowledge <input type="checkbox"/> Absence of better and fast maturing breeds locally adaptable
Brokerage – at the village level	<ul style="list-style-type: none"> <input type="checkbox"/> High incidence of diseases <input type="checkbox"/> Limited supply of quality and mature chicken within reasonable distances²³ <input type="checkbox"/> Low capitalization due to inadequate financial resources and risks associated with mortalities on transit.
Distant trading	<ul style="list-style-type: none"> <input type="checkbox"/> High incidence of diseases <input type="checkbox"/> Limited supply of quality and mature chicken within reasonable distances <input type="checkbox"/> Transit mortalities related to transportation systems and technologies <input type="checkbox"/> Bulking costs – feeding and ‘warehousing’ leading to reduced profit margins <input type="checkbox"/> Transportation costs <input type="checkbox"/> Poor market facilities –in tertiary and secondary markets for trade <input type="checkbox"/> Inadequate knowledge for identification of diseases <input type="checkbox"/> Non-existence and enforcement of quarantine for contagious diseases <input type="checkbox"/> Cost of poultry movement permit <input type="checkbox"/> Limited operating capital.
Primary market trading	<ul style="list-style-type: none"> <input type="checkbox"/> High incidence of diseases and high mortalities <input type="checkbox"/> Limited supply of good quality and mature chicken <input type="checkbox"/> Increasing costs of ‘warehousing’ over selling period – purchase of feeds <input type="checkbox"/> Double payments of market charges – chicken entry, slaughter inspection (where relevant), trade license, and stall rentals <input type="checkbox"/> Competition from other traders over a shrinking market niche <input type="checkbox"/> Limited operating capital.
Consumption hubs (fast food cafes, restaurants and hotels)	<ul style="list-style-type: none"> <input type="checkbox"/> High incidence of diseases – hence pushing towards loss-making²⁴ <input type="checkbox"/> Limited flow of indigenous poultry meat in fast food cafes – associated with quality. Exotic birds are considered tender and easy to prepare <input type="checkbox"/> Lack of reliable supply systems especially where there are no established channels and relations <input type="checkbox"/> Price variations and fluctuations.

Source; Field investigations, October 2005

²² Comparable with the situation as reflected in the preliminary sub-sector analysis by CRSP (K) (see Fowler, 2005 – Figure 5).

²³ The brokerage service is mainly carried out by young men. The ratio of men to women is 9:2, as a result of the hardships of extensive movement. Bicycles are the core tools of trader and the broker often cover 30 km radius to bulk supplies for the traders they supply. Since women prefer walking, this category of operation is rather challenging.

²⁴ This is a situation notable in bars where the tendency is to purchase many birds and keep them within their precincts awaiting for customers – to assure and ensure freshness. Others will buy, slaughter and keep the carcasses in deep freezers.

From the 5 categories /levels of assessment, 5 constraints are widely notable. The limited vibrancy and growth of the sub-sector is highly constrained by this combination. The core constraints are expounded below to illustrate their relationship with the sub-sector and how they are appreciated by the actors;

- ❑ *High incidences and rates of diseases:* Along the production and marketing chain, poultry diseases are notably reported and identified as a challenge. New Castle Disease is cited as one of the notable poultry health concern. The disease is known to cause high mortalities worldwide especially among the unvaccinated birds. This occurs as an epidemic in areas and can wipe out the bird population in a short period. Other diseases reported and qualified from expert consultations include infectious coryza and the chronic respiratory diseases. Farmers in the region do not feel disposed to devote efforts and money on poultry veterinary services, as they consider poultry as a ‘by-the-way’ activity that does not call for specialized attention and commitment of resources.

Currently, the knowledge about diseases among the local farmer is limited. As much as the knowledge about potential existent of disease-management drugs is apparent, the farmers are neither aware of the sources for expert information. The drugs are also packaged in large quantities that the local producers would consider inaccessible financially. The tendency is therefore to use local knowledge and approaches in managing diseases and pests – such as putting crushed aloe *spp* leaves, red pepper and neem in water taken by the birds. Some farmers also squeeze the top lid of the eye of the sick birds or apply a small hot rod on the forehead.²⁵ There is also notable use of *Power-Tab* for managing external parasites. This is however a non-conventional approach in that the user guidelines are not available and if this is a viable mechanism, some harmonized method is absent.

Among various traders along the chain, there is little or no effort to manage poultry diseases. Between the purchase point and point of delivery, traders are keen to spend limited time so as to offload the stock. Based on the field discussions with the traders, it is apparent that no traders purchase drugs for the poultry bought. Direct input costs are only committed to purchase of some feeds – mainly leftovers and bran from hotels while making arrangements either for transit or in the pens awaiting buyers. Depending on the season and occurrence of diseases, the mortalities would range between 1 and 3 for every 10. However, this is limited. Traders lack adequate information for early identification of disease, some valuable input in their trade that is likely to assist in reduced losses and mortalities.

In situations where farmers indicated that the best approaches to deal with the outbreak of diseases was to sell the whole flock immediately, this presents a challenge in the chain. The interest here is to transfer the potential losses without due consideration of the overall effect on a wider scale. The focus should be on managing the diseases at the production level to safeguard quality in the overall as well as sustain better margins.

- ❑ *Increased mortality rates:* Across the various functional levels of the chain, mortalities are apparent. At the producer level, from 13 eggs laid (on average), hatchability is reported at 70% to 85% - giving 9 to 11 chicks. However, potential mortality is highest during the first 2 weeks. On average and under the current poultry management practice, survival to maturity is as low as 40% to 55% of the hatched chicks – the range being 4 to 6 out of 13 eggs. This presents a situation where overall survival is below 50%. Though,

²⁵ From other investigations, use of other inputs to manage diseases among the farmers in Kwale is report. Such include *Omo* (a common brand of detergent), sisal sap, tobacco, chillies and chloroquine served in water (Mwamachi *et al.*, 1998).

mortality cannot be isolated on diseases within the localities of interest as other factors were notable at the production level. These include predation, inadequate feeds (associated with the free-range management system), and internal as well as external parasites. Evaluating the potential income loss assuming a price of Kshs. 87.50 per bird (mean average farm-gate price), a household would lose between Kshs. 612.50 and 787.50 per single clutch. Taking a maximum of three clutches per a hen, a household has a net loss of between Kshs. 1,837.50 and 2,362.50 per a mature hen. This illustrates the magnitude of opportunity costs associated with poor flock management and viable income opportunity at the production level lost.

Brokerage and secondary poultry trading levels are not operating in absence of mortalities. Though the level here is lower than at the production, the associated factors include congestion while on transit due to poor handling methods, and diseases. Often, transportation is by bicycles while in poorly-made transit cribs. By maximising the use of cribs, the number of birds often exceeds the holding capacity. In public transport vehicles, the chicken are either put under the seats, in the boot or suspended on the carriers. Such exposures have implications on health status while swings create bruises on their bodies. At the primary market level, mortality is lowest as traders are selective and rather careful at market entry. However, this is not to mean that mortality is irrelevant. In cases where the stock lasts for over 3 days, the chances for mortality are increased.

- *Low capitalization and limited access to credit facilities:* From poultry producers to traders, the status of operating capital is notably low. The inability to raise significant and viable flock sizes of above 50 is basically a factor of management and related costs. Poverty in the districts is estimated at 62% (for Kilifi) compared to the national figure of 58%. Focusing on the four divisions alone, it is likely that the poverty status is higher hence impacting on the capacity to acquire necessary sub-sector inputs. Further, access to credit is limited by entrepreneurship and ability to repay. This is currently a disincentive among the credit providing agencies to focus on the rural areas. Though, potentially there are likely channel for input credit.

A mechanism to broaden quality breeds and access is formally missing. The role of informal breeders is not extensively known and appreciated by the poultry farmers in the region; their work is critical in breed selection and provision of quality stock. However, vibrant functioning of these players is limited by inadequate capital for expansion of operations and enhanced professionalism. To increase their capacity to serve farmers, informal breeders require essential inputs and support systems.

The relationship between brokers and distant traders is tied to and associated with extension of 'informal lines of credit' in exchange with business allegiance. Though this relationship is currently favourable, it provides an operational framework where the brokers lack opportunities for graduation. The capitalization level does not exceed Kshs. 5,000.00.²⁶ Often, the key trader asset is a bicycle plus a small poultry crib.

Distant traders and primary market traders are in need of additional capital to expand their enterprises yet they lack information and access to such facilities. Where such facilities exist, some of these traders are not in a position to participate in the prescribed systems of the micro-finance institutions for which peer pressure groups have to meet regularly.

²⁶ Based on discussions with brokers and level of credit provision by the distant traders. This is also coupled with independent assessment of the financial abilities and bulking capabilities /limits of the brokers.

- ❑ *Participation of the municipal authorities in markets development and marketing activities:* Poultry marketing is taking place at the household level, along the roads to recognized market centres and in the market centres yet the local authorities are doing little to facilitate and support the market organization. Except for Mombasa where three structured integrative markets are located (Mackinnon Road, Majengo and Kongowea) there are no similar facilities especially in the source markets. In Kinango, Guru Guru, Bamba, Mariakani, and Samburu among others, the council has given prominence and special attention to other types of livestock in which auction structures are erected. Poultry trade is not prioritized while there are essential needs; shaded trading structures, transit pens, watering facilities, opportunities for business inertia such as selling cribs, poultry drugs, and bicycle repairs, among others.

Currently, distant traders are required to pay a business license of Kshs. 3,500.00 per year to the council yet there are no complementing services provided. In addition, traders have to acquire transit permits at a cost of Kshs. 1.00 per chicken and up to Kshs. 2.00 per chicken to enter stock in destination markets such as Kongowea, Mackinnon Road and /or Majengo in Mombasa. Overall, there are a substantial proportion of trading costs associated with the local authorities, remitted at different stages, which creates trading impediments.

- ❑ *Transportation mechanisms and associated challenges:* A general observation in the trading operations shows that transportation of chicken is generally poor. First, most of the cribs are poorly designed and offer no significant protection to the birds. Some of them are in state of collapse. Quite often, chicken are suspended on public transport carriers and bicycles. For long distances, they are either put in the boots or under the seats – exposing them to risks of being stepped on. Commercialisation of cribs production in the region is almost non-existent. Nearly 80% of the mortalities that traders suffer from are associated with transport arrangements and systems. It is therefore evident that interventions related to better handling of poultry on transit present an opportunity for reducing losses especially among brokers and distant traders.

Efforts to integrate approaches of addressing these constraints present valuable opportunity in;

- ❑ Increasing the sub-sector production and hence the incomes of the producers as well as other players
- ❑ Enhancing the quality of birds from the region
- ❑ Increasing general sub-sector management knowledge and competence
- ❑ Facilitating active participation of women in the sub-sector
- ❑ Overall commercialization and general organization /linkages development.

4.0. PRINCIPAL FINDINGS AND INTERVENTION OPPORTUNITIES

4.1. Emerging Issues

4.1.1. General Findings

- ❑ Production status is currently too low in such a manner that on average, the general flock sizes are uneconomical.
- ❑ Trading margins are relatively higher and lucrative for cockerels while the production and trading costs for hens and cocks do not vary at all. Unfortunately, hens are more in the market. Better profit margins are enjoyed by brokers and traders.
- ❑ Smaller markets exhibit poor returns, which is associated to limited numbers of chicken at the market.
- ❑ The supply gap for indigenous poultry is apparent – the current supply level to the Mombasa end market and demand by other areas compared to sourcing provide supply gap opportunity that producers and traders can take advantage of.
- ❑ The main weak hub that currently requires input and nurturing is the production side. In support to mainstreaming of business services, the participation of brokers in particular is considered critical as they retain contacts with producers.
- ❑ Business services to the sub-sector are limited. Such services would require nurturing and subsidized support over a period of time.
- ❑ Knowledge and interest as well as competence to commercialize indigenous poultry keeping is not well developed in all areas and is unlikely to produce significant results unless pre-selection and pilot areas are used to intervene.
- ❑ Trading relationships between brokers and traders is well developed, though informal credit provision system.
- ❑ Selective identification, and strengthening of sub-sector based groupings for poultry production – training in poultry production as a business (the role of SO and TI) here are critical – for CRSP (K) to make a foothold and entry.

4.1.2. Issues on Production

- ❑ The current indigenous poultry production systems are not business-oriented. Hence they are weak and undeveloped. Keeping poultry remains a traditional practice in which minimum input is applied hence achieving minimum return. The contribution of poultry sub-sector to the household economy is generally minimal – currently not exceeding 5% of the overall average household income.
- ❑ Managing chicken diseases and pests remain a critical challenge among the producers due to cultural considerations and inherent production systems – based on free range.
- ❑ Current flock sizes are highly variable and often exhibit poor state of the sub-sector economy.
- ❑ Developing indigenous poultry as a commercial sub-sector will present a significant shift from a traditional system that requires participation of various stakeholders as well as time – including input in various segments of the chain.
- ❑ The production arrangements illustrate the focus on size among the producers than quality. The producers are ignorant about breeds selection and sourcing for better production scale.

4.1.3. Issues on Markets and Marketing Process

- ❑ The status of indigenous poultry market indicates that the end market in Mombasa is far from being saturated. There is a significant proportion of poultry sold in Mombasa emerging from distant sources due to inability of the province to self-satisfy.

- ❑ The general market organization for the indigenous chicken especially between the brokers and the Mombasa end illustrate significant organization and opportunities for strengthening. Some of these include addressing epidemics and inculcating good flock management practices. On the other hand, the selling regimes among the producers are dictated by low resource flows such as bird selection and flock timing. Prices are generally low.
- ❑ Chicken marketing is highly polarized and exhibits strong ‘informal organisations’.²⁷ Traders are served by ‘their’ brokers while market-based traders operating in Mombasa are served by ‘their’ distant traders. Likewise, stationed traders in designated markets work through ‘errand boys /traders’ to source chicken from secondary markets and the interior.
- ❑ Trading patterns and relationships between stationed and distant traders on one side and brokers as well as ‘errand boys /traders’ on the other side show that the link is sustained through some form of ‘lines of credit’ – an opportunity for BDS exploration. There are pre-purchase credit provisions based on the understanding that the pre-funding is honoured through sole selling of chicken. This quite often happens as much as there are no control systems on the selling.
- ❑ There are no well developed marketing systems and structures for indigenous poultry, a component that best seats with the Local Government and the Department of Veterinary Services. The situation presents a process opportunity to RED and calls for sensitization and soliciting for support and cooperation from the relevant offices. Currently, CRSP (K) enjoys a good working relationship with the Ministry of Livestock and Fisheries Development and especially with the offices of the DLPOs – which it can exploit.

4.1.4. Issues on BDS and Commercialisation Approaches

- ❑ The BDS market in indigenous poultry sub-sector is weakened by high levels of poverty and continued dependence on relief supplies among the local population. There are, however some interesting and sustainable market relationships between local brokers, poultry dealers and consumer-market traders, based on sourcing, bulking and delivery.
- ❑ Results of the survey indicate extensive interest among the producers to re-evaluate the sub-sector and engage in the commercialization process. In order to stimulate this, RED will need to isolate activities that it can carry out in collaboration with other units within CRSP (K) as well as partner with relevant government departments and other stakeholders as illustrated in the VCA map. A number of these have been clarified in other sections of this report.
- ❑ Since business approach is relatively a new phenomenon in the indigenous poultry sub-sector among the producers, CRSP (K) will need to kick-start the change with its direct involvement and provision of subsidies especially as it works with farmers to build viable flocks. Diverse approaches would need to be considered including cockerel exchange, subsidizing the purchase of chicks acquired from informal breeders to be paid through a voucher system, and awards from accelerated sales of quality birds.

4.2. Opportunities and Recommended Actions

The indigenous poultry sub-sector is a viable broad enterprise in which CRSP (K) is better placed to intervene. Though, a number of pre-conditions are noteworthy;

- ❑ Owing to weaker production side, significant efforts are required in stimulating production through a number of approaches including sensitisation, support in breed selection, extensive extension support and training in disease management.

²⁷ Though, this is partly accounted for by long distances to dependable markets and economic rationality of the producers.

- ❑ A medium-term programme is better placed to guarantee impacts. CRSP (K) should not focus on less than 5 years programme since maximum support at the production end is required while first sales would not be forthcoming before a lapse of 18 months.
- ❑ Comprehensive partnership in the implementation with stakeholders in relevant government departments is essential. The RED unit further lacks requisite staffing and this would need serious consideration.
- ❑ Initial targeting of commercial services should focus on producer groups or a village rather than individuals. The capacity to pay for services is still limited due significant rural poverty

4.2.1. Opportunities and Intervention Path for RED

From the preceding analysis, six opportunities relevant to RED within the poultry sub-sector are apparent;

- ❑ *Enterprise clustering:* Selection of viable clusters for initial engagement since not all the 116 villages can be involved. Based on this study, significant interest and enthusiasm was notable in Chilumani (covering Chilumani A and B, Mwaruphesa (including Mwaruphesa, Chanzou 1 and 2), and Marondo.²⁸ There is need to compare these clusters with the level of capacity development by the SO department for balanced entry.
- ❑ *Sensitisation on poultry enterprise:* Developing poultry keeping as a business through conducting training among selected VDOs showing higher interest in the sub-sector. This will require preparation of the relevant training module that should include breed selection. The development and delivery of this module can be done through the support of a consultant but will require the participation of the relevant units within CRSP (K) – including PPI, TI and SO. Follow-up support will be essential in order to actualise the training content and commercial focus in production.
- ❑ *Credit and /or inputs provision support:* Strengthening of credit provision opportunities between different trader categories and support in chicken selection and marketing through training on identification of quality birds especially for the brokers and ‘errand boys /traders’. Traders lack adequate capitalisation. Linking traders with credit providers through networks in a critical step for relationships’ building.
- ❑ *Informal breeders as extension agents:* Promoting the growth and functioning of informal breeders based on lessons from the already concluded National Poultry Development Programme. A number of potential sources of improved breed stock exist in Kilifi and Kwale. Promotion of their operations as business as well as learning points for other producers is a potential springboard for improved stock as well as better flock management practices.
- ❑ *Promotion of consumption:* Promotion of indigenous poultry consumption through marketing support and campaigns in collaboration with other agencies. There is need to ascertain what WorldVision is doing in the sector in Kaloleni as well as networking with the Local Authorities for structural improvements of chicken selling points on a win-win basis.
- ❑ *Brokers as providers of embedded services:* Stimulating disease awareness and market information support among traders as well as developing and mainstreaming disease advisory and management competences among producers through brokers (as information intermediaries). Further, training and interesting of village-based brokers

²⁸ The basic criteria applied in pre-assessment and associated results are presented in Annex 8.0.

and orientating them to promoting quality indigenous poultry keeping through advice has a potential of positively impacting on producers. This way RED would impact and promote production node and efficiency through an indirect approach – by taking up a participatory role.

4.2.2. Viable Strategies and Approaches to Intervention

The following 5 points were considered as strategies supportive to the identified interventions relevant to RED;

- ❑ *Combining service delivery and facilitation:* Based on the status of production and general structure of the sub-sector, RED would be disadvantaged in operating on the strict principles of the donor guidelines to small enterprise development. In an effort to stimulate increased production as well as speeding up service delivery and uptake, RED should combine direct service delivery and facilitation while at the same time making efforts to engage and create private sector participation in the long term. At the entry stage, exit strategies should be well developed and entrenched.
- ❑ *Priority Poverty reduction and income generation as priority pivot:* Though RED is about enterprise development and promotion, basic principles in supporting the sub-sector should be entrenched on the CRSP (K) mandate – that of addressing rural poverty. In this regard, there is need to focus on awareness creation of varied services and their interrelationships as well as links to poverty alleviation.
- ❑ *Subsidisation:* Subsidies have to be factored in within the intervention since one of the critical starting points is targeting of the production end. As RED develops and broadens the sub-sector, the level of subsidies, whether direct or indirect should be reduced gradually. Initial subsidies are expected in facilitation of extension services, flock building, direct investment in purchase of certain inputs for demonstrations, and costs cover for hosting sensitisation meetings, mobilisation and kick-starting training work.
- ❑ *Services and support integration:* Adoption of visible integration in development and delivery of supportive services should form part of the design. Critical elements include extension and training, institutional development for markets' enhancement, input supply chain and relationships brokering, breeds selection and management, most of which should be targeted at the weak point of production.
- ❑ *Relationship-building:* Strengthening relationships with relevant government departments need to be emphasised as a precursor and pillar to the intervention. Identified departments include livestock production, veterinary services and the local authorities.

4.2.3. Composition of Relevant Intervention Programme Activities

The VCA process identifies areas in which RED would be better placed to intervene. A number of possible activities include the following;

- ❑ Awareness creation and utility /value appraisal for promoting indigenous poultry production as a business among selected villages ²⁹
- ❑ Development and delivery of a comprehensive training on 'Indigenous Poultry Keeping and Management as a Business' ³⁰
- ❑ Technical support to breeds selection – adaptable to the region based on results and remote continuity of the National Poultry Development Programme

²⁹ The criteria of full selection of start-up villages should be based on the results of the VCA combined with the continued capacity development campaigns of the Social Organisations (SO) department of CRSP (K)

³⁰ This course or training pack can be modelled on the lines of similar training initiatives funded by USAID (e.g. Mango Farming as a Business {SITE EP Limited}, Maize Production as a Business {ACDI/VOCA})

- ❑ Constituting poultry producer groups based on cohesion, self-interest and business vision – and capacity development for efficient functioning
- ❑ Para-vet and para-professional training and induction of local brokers for improved phyto-sanitary conditions and reduced disease outbreaks. This calls for selection of interested brokers and training them on standards and disease indicators
- ❑ Networks development for sub-sector linkages for credit provision and support as well as market development facilitation for other inputs' supply and services.

4.2.4 Potential Partners and Co-implementing Stakeholders

RED is better placed working with other agencies for synergies, knowledge-sharing and effectiveness. The participation of the stakeholders identified below should be considered in programme development;

- ❑ Informal breeders as local community-based poultry production trainers – towards setting up and managing 'informal demonstration' centres, production units and sources of adaptable stock
- ❑ Brokering relationships between informal breeders and local poultry producer communities for learning, breed purchasing and advisory on production
- ❑ Poultry producer and marketing groups – for improved outreach in information provision and enhanced bargaining power in the market. Through such groups, enterprise education, training and support services to the sub-sector have a better channel of delivery and ease of application /outreach is also enhanced
- ❑ Local brokers for production-level disease management – provision of value-adding extension services through the para-extension knowledge. Local brokers have better knowledge about the producers and have more contact hours out of the nature of their operations and business
- ❑ Local brokers as trade /input supply intermediaries between local producers and agro-chemical input suppliers based in urban areas. Local brokers can act as sustainable 'connectors' whose services can remain embedded
- ❑ Input suppliers and credit providers – working with local brokers and prominent traders.

REFERENCES

- Aga Khan Foundation, May 2005. *Workshop on Rural Incomes and Employment in Coastal Kenya 10th to 12th May 2005, Serena Hotel Mombasa*. CRSP (K), Mariakani.
- CRSP (K), June 2005. *RED Strategic Document (Draft)*. CRSP (K), Mariakani.
- Dolberg F., December 2003. *Review of Household Poultry Production as a Tool in Poverty Reduction with Focus on Bangladesh and India*. PPLPI Working Paper No. 6. FAO, Rome.
- Fowler B., April 2004. *Analysis of the Indigenous Poultry Sub-sector in Kwale and Kilifi Districts of Kenya; Preliminary Findings*. Coastal Rural Support Programme – Kenya, Mariakani.
- Government of Kenya, June 2003. *Economic Recovery Strategy for Wealth and Employment Creation, 2003 – 2007*. Government Press, Nairobi.
- Hileman M. and Tanburn J., 2000. *The Wheels of Trade; Developing Markets for Business Services*. IT Publications, London.
- Kula O. and Farmer E., October 2004. *Mozambique Rural Financial Services Study*. AMAP and OCIDI/VOCA, Washington, DC.
- Miehlbradt A.O. and McVay M., 2005. *From BDS to Making Markets Work for the Poor. The 2005 Reader - Annual BDS Seminar 2005*. ILO International Training Centre, Turin - Italy
- Mwamachi D.M. et al., 1998. *Revisiting a Local Resource: Practices, Constraints and Opportunities for Rearing Indigenous Chicken in Kwale District*. RRC Mtwapa Technical Report No. 1. Kenya Agricultural Research Institute, Mtwapa.
- Njenga S.K., January 2005. *Productivity and Socio-Cultural Aspects of Local Poultry Phenotypes in Coastal Kenya*. Unpublished MSc. Thesis. The Royal Veterinary and Agricultural University (KVL) - Danish Institute of Agricultural Sciences.
- Njue S.W., January 2003. 'Family Poultry Production in Kenya', in Workshop Proceedings; *Poultry as a Tool for Poverty Alleviation*. Network for Smallholder Poultry Development, January 2003, Mombasa.
- Nyange R.K., 2000. 'Smallholder Poultry Production in Kenya', in Pedersen G., Permin A., and Minga M.U., (Eds.) 2000. *Proceedings of the Workshop on the Possibilities for Smallholder Poultry Projects in Eastern and Southern Africa*. (held in Morogoro, Tanzania) Network for Smallholder Poultry Development, Denmark, pg 31-40.
- Society for International Development, 2004. *Pulling Apart: Facts and Figures on Inequality in Kenya*. SID, Ministry of Planning and National Development and SIDA, Nairobi.

Other Relevant Documents:

- Njue S.W. et al., 2001. 'A Survey of the Disease Status of Village Chicken in Kenya', in Workshop Proceedings; *Livestock Community and Environment: Proceedings of the 10th Conference of the Association for Tropical Veterinary Medicine, Copenhagen, Denmark, 2001*.
- Njue S.W. et al., (undated). *Health and Management Improvements of Family Poultry Production in Africa – Survey Results from Kenya*. Kabete Veterinary Research Laboratories, Nairobi.
- Njue S.W. et al., (undated). *Evaluating the Effects of Newcastle Disease Control and Improved Feeding Regime on Productivity of Village Chickens in Kenya*. Kabete Veterinary Research Laboratories, Nairobi.

Newnham J., April 2000. *The BRAC Poultry Programme in Bangladesh; A Performance Measurement Framework Case Study on Business Development Services for Micro, Small and Medium Enterprises*. ILO BDS International Conference, Hanoi, Vietnam - April 3-6, 2000.

Mlozi M.R.S. et al., November 2002. *Marketing of Free range Local Chickens in Morogoro and Kilosa Urban Markets, Tanzania*. Sokoine University of Agriculture and The Royal Veterinary and Agriculture University – Frederiksberg, Denmark.

Sorensen C., October 2004. 'Is BDS Relevant for the poor in Kenya?' a paper presented during the First Kenya BDS Seminar – *What works, What doesn't work in Kenya*, held in Naivasha Simba Lodge, 13th – 14th October 2004.

ANNEXES

Annex 1.0: Terms of Reference

COAST RURAL SUPPORT PROGRAM KENYA -CRSP (K)

Terms of Reference for the Value Chain Analysis of the Indigenous Poultry Sub-Sector

Context

The Coastal Rural Support Programme (Kenya) is a project of the Aga Khan Foundation. It is dedicated to “sustainable and equitable improvement in the livelihoods of poor households by stimulating economic growth and social development in the programme area.” As an integrated development programme, it works in a number of thematic areas, including infrastructure, crops and livestock, education, social organization, health, and enterprise development. It currently is operating in 116 villages in 4 divisions of the districts of Kwale and Kilifi in Coast Province.

Background

The Rural Enterprise Development (RED) unit within the Coastal Rural Support Programme (Kenya) is currently undergoing an extensive strategic planning process to reposition itself in line with the changing international trends with respect to enterprise development and rural income generation. The unit’s purpose statement is “to develop market systems that offer diversified and reliable income growth and employment generation opportunities, targeted especially to women and the poorest, through an approach of facilitative market enhancement that reflects current good practice.” It has three objectives to achieve this strategy:

- increasing income levels from existing sources and employment/self-employment for large numbers of targeted poor and female producers
- diversification of income sources and strengthening of their reliability
- strengthening of marketing systems for local products.

As part of the strategy development process, the RED sector performed four rapid sub-sector analyses on the major income sources for rural smallholders in the program areas of Kwale and Kilifi districts in which it works. The sub-sectors involved were indigenous poultry, cowpea leaf, groundnuts, and charcoal. As part of the implementation of its strategy, it is now looking for external input on the development of one of the more promising of these sub-sectors – indigenous poultry.

Purpose

The study of the indigenous poultry sub-sector will provide CRSP (K) with crucial information regarding the feasibility of moving forward with interventions in the sub-sector and coming up with a viable plan of action for the approach(es) that will best allow this to happen if so recommended.

Scope

The focus of the study will be on the identification and understanding of structural, organizational (behaviour) and operational (performance) dynamics of the indigenous poultry sub-sector, and translation of the potential opportunities previously identified into concrete activities and methods, basing all recommendations on an appropriate rationale supported by detailed feasibility analysis of the available and relevant qualitative and quantitative information.

The specific terms of reference for the consultancy shall be:-

1. Based on a detailed review of the existing documentation, identify key information gaps and structure the study to capture information needed to fill these gaps. Specifically the

study should focus on obtaining relevant quantitative information at each level of the value chain that may inform impact projection and targeted planning of interventions. To do this, the consultant will need to carry out a critical review /analysis of the existing reports of the studies already conducted by CRSP on the sub-sector and build on the information contained in the studies with a view to improving the subsequent sub sector analysis report.

2. Based on analysis, identify and consolidate relevant constraints and opportunities (if any) along the value chain to inform design of future interventions and activities to realize these impacts. The study should actually assist CRSP in deciding whether or not to proceed with interventions in the sub sector and the related investments therein.
3. Building on previous work and new information /scenario emerging from this follow on study, perform a detailed analysis of the sub sectors in terms of their relative potential for income & employment generation and document opportunities for business development services (BDS) and make suggestions on how best to actualize or put these opportunities into action. To do this, detailed analysis of the sub-sectors to obtain quantitative information relating to production volumes, marketing channels and volumes handled, prices, number of actors per channel, income levels and transaction costs etc will be essential.
4. Based on the above information, assess the feasibility, practicability, willingness and appropriateness of various existing stakeholders and service providers to expand the services they offer and / or their role in the sub-sectors.
5. Evaluate the willingness and feasibility of producers /smallholders to pay for the business services they require, and the most efficient method of service provision.
6. Based on documented information, project /estimate in quantitative terms the likely returns or anticipated impact on the target community in terms of production, income and employment generation levels through investments in the development of the sub sector. Outline any possible obstacles or risks that may hinder achievements of these impacts or anticipated results.
7. Make concrete suggestions on the sequence of activities /actions needed to address the opportunities and constraints – in short suggest a road map for implementation. From the study report, CRSP should be in a position to develop a sequential and appropriate action plan giving timelines /a clear guideline for strategic phasing out intervention (activities) - and the need for possible overlaps where the former is impossible.
8. Identify the major market opportunities that exist in each of the sub-sectors, and then rank and judge their appropriateness for the target groups with which CRSP (K) works.
9. Through the examination of existing technologies and assessment of their relative practicability, competitiveness and appropriateness for rural producers, determine potential options for value addition by communities and recommend whether they are appropriate.
10. Based on the overall available information, measure the level of market demand /saturation point in the local and regional markets.³¹

³¹ Local markets are defined as those within Coast Province, while regional refers to the Kenyan and East African markets altogether.

11. Orient /tailor all results of the studies towards their practical incorporation into subsequent CRSP (K) strategy /project design. Whenever possible, make specific recommendations on possible approaches that CRSP (K) should use or avoid. At the end of this process CRSP should have a clear idea of the potential strategy required for implementation, while recognizing subsequent issues will emerge during implementation process. The suggestions should as much as possible aim to inform and improve the strategy that CRSP (K) has developed for its work on rural incomes and employment generation. To do this the consultant shall be required to carry out detailed review of this strategy.

Output

The main output from this assignment should be a detailed report of at least 30 pages written in business English and font 12 single line spacing capturing main findings and analyses. The report should include a detailed elaboration of recommended approaches to project design and implementation by CRSP (K), including identifying the specific constraints, opportunities that need to be addressed, in what manner, and through which intermediaries this should be accomplished (where applicable). In addition the consultant shall develop a brief proposal (8 pages max) outlining the process or methodology to be applied in order to fully deliver the outputs of this assignment.

At minimum, the consultant should provide one soft copy and one hard (printed) copy of the full report including appendices.

Qualifications and Experience Required

He/She must have a minimum of:

- Five years work experience in value-chain analysis
- Five years of work experience in a developmental capacity, preferably within an NGO
- A minimum undergraduate degree in a related field
- Experience conducting consultancies for NGOs in work related to enterprise development
- Knowledge or work experience pertaining to the particular sub-sectors in question will be highly valued
- Excellent report writing skills

Timeframe

The consultancy should take a total period of 16 days, which is described in detail below:

Day	Assignment
1	Documentation Review and Assignment Orientation
2	Pre-Field Consultations with CRSP (K) staff and design of the survey tool and approach
3	Reviewing /refining of survey tool and agreeing on field data collection logistics
4-13	Field engagement /Data collection & ongoing consultation and clarification of emerging concerns from field work
14-16	Report Compilation (including potential presentation to selected staff within CRSP (K))

Annex 2.0a: FGD guideline (with poultry producers)**Value Chain Analysis of the Indigenous Poultry Sub-Sector in Kilifi and Kwale Districts**

Locality _____
 VDO _____

Participants (#) _____
 Date _____

#	Target issue	Filter questions	Field data /discussion results
1.	Identification and understanding (Target – Preliminary)	Structural	
		Organizational (behaviour)	
		Operational (performance) dynamics of the indigenous poultry sub-sector	
2.	Detailed analysis on which to reflect; (Target – 3)	Required data; <ul style="list-style-type: none"> • production volumes, marketing channels • number of actors per channel • prices, transactional costs, production costs, cost of services • providers of services, and associated mark-ups 	
		Relative potential for income and employment	
		Opportunities for business development services	
		Best /viable approaches of mainstreaming the BS	
3.	Identify and consolidate relevant; (Target – 2)	Constraints at different levels; <ul style="list-style-type: none"> • producers, market intermediaries, suppliers of inputs, and other agencies supporting ED 	
		Opportunities at different levels; <ul style="list-style-type: none"> • producers, market intermediaries, suppliers of inputs, and other agencies supporting ED 	
4.	Feasibility and practicality assessment on; (Target – 4 & 5)	Willingness of stakeholders to participate in the service area	
		Appropriateness and value purpose of the stakeholders in what they do	
		Business and operations knowledge of the stakeholder	
		Awareness of BSs relevant to the stakeholder	
		Sourcing and access to relevant BSs to the stakeholder	
		Opportunities for BSs on a commercial basis – weak markets	
Assess demand and potential requirements for BSs			

Cont..

#	Target issue	Filter questions	Field data /discussion results
5.	Estimate and projection of potential gains; (Target – 6)	Quantitatively - the likely returns or anticipated impact on the target community in terms of production	
		Income and employment generation levels through investments in the development of the sub sector	
		Possible obstacles or risks that may hinder achievements of these impacts or anticipated results	
6.	Market demand measurement – adequacy, inadequate or market saturation; (Target – 10)	Market outreach	
		Overall pricing	
		Price determination	
		Price fluctuations and differentials	
		Indigenous chicken flow in the market – market volumes	
		Chicken consumption trends	
7.	Market opportunities' identification; (Target – 8)	Identify market opportunities; <ul style="list-style-type: none"> • inputs supply, market linkages • collection networking, bulking • extension support and breed improvements 	
		Appropriateness – based on; <ul style="list-style-type: none"> • business viability and sustainability of services, leverage • policy alignment, and poverty alleviation 	
8.	Business opportunities (Target – 9)	Technological issues – production, transportation, market care	
		Value addition opportunities – along the chain	
9.	Concrete suggestions (Target – 7)	Sequence of activities /actions to convert the opportunities	
		Recommendations to address the constraints	
		The viable implementation approach /sequentially with timelines	

Annex 2.0d: Discussion guidelines – consultations with key officers in relevant government departments**Value Chain Analysis of the Indigenous Poultry Sub-Sector in Kilifi and Kwale Districts³⁴**

Core issues	Filters	Results of discussions
Status of indigenous chicken sector	production trends in the last five years	
	estimated value of the indigenous chicken sector – based on current annual report	
	production per household	
Services from the department	Extension support – nature	
	Market development – status	
	Cockerel exchange and other related services	
	Role of the department in poultry sector development	
Support to the sector	As per different actors known to the office	
Challenges /constraints facing the indigenous poultry sub-sector	Including chicken management, breeding, breed selection, trade issues, etc	
Opportunities for intervention in;	enhanced production and management /knowledge	
	Marketing	
	Access to extension services	
	Technology	
	Linkages and orders management	

³⁴ Focussing on the DLPOs, DLEOs, DVOs, among others

Annex 2.0e: Discussion guidelines – consultations with key local authority officers**Value Chain Analysis of the Indigenous Poultry Sub-Sector in Kilifi and Kwale Districts³⁵**

Core issues	Filters	Results of discussions
Sourcing of chicken	Sources of chicken in the market	
	Chicken trends and numbers	
Trading dynamics	Chicken volumes and trend in the markets	
	Marketing chain and transactional arrangements	
	Role of the LA in chicken market	
	Inefficiencies in the chain	
	Financial returns from indigenous poultry component for the LA	
Constraints in indigenous chicken marketing	Opportunities for markets management	
	What new roles the LA can play	
	Other players with potential opportunities for inclusion	
	Market chain arrangement opportunities	
Opportunities in indigenous chicken marketing	Opportunities for markets management	
	What new roles the LA can play	
	Other players with potential opportunities for inclusion	
	Market chain arrangement opportunities	
	Potential interventions for CRSP (K)	

³⁵ Including the market officers and supervisors, local government representatives, etc.

Annex 3.0: Indigenous poultry data for 4 divisions of Kilifi and Kwale Districts

Year	Division	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Average monthly
2003	Samburu	*	*	*	*	*	*	102,000	120,000	140,000	150,000	150,000	121,000	195,750
	Kinango	*	*	*	*	*	*	*	70,503	70,503	70,503	70,503	70,503	29,376
	Kaloleni	66,000	66,000	66,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	*	31,167
	Bamba	*	*	*	*	*	*	*	*	100,000	100,000	100,000	100,000	33,333
	Total	66,000	66,000	66,000	22,000	22,000	22,000	124,000	212,503	332,503	342,503	342,503	291,503	204,750
	Average	16,500	16,500	16,500	5,500	5,500	5,500	31,000	53,126	83,126	85,626	85,626	72,876	
2004	Samburu	121,000	121,000	121,000	121,000	121,000	121,000	121,000	121,000	121,000	121,000	121,000	121,000	121,000
	Kinango	71,913	79,913	79,913	79,913	79,913	79,913	79,913	79,913	79,913	79,913	79,913	79,913	79,246
	Kaloleni	35,000	51,000	30,000	30,000	30,000	51,000	50,000	99,000	99,000	50,000	*	*	43,750
	Bamba	*	*	*	*	*	*	100,000	100,000	100,000	100,000	100,085	100,085	50,014
	Total	227,913	251,913	230,913	230,913	230,913	251,913	350,913	399,913	399,913	350,913	300,998	300,998	294,011
	Average	56,978	62,978	57,728	57,728	57,728	62,978	87,728	99,978	99,978	87,728	75,250	75,250	
2005	Samburu	121,000	121,000	121,000	121,000	121,000	121,000	121,000	121,000	122,000				121,111
	Kinango	81,511	81,511	81,511	81,511	81,511	81,511	81,511	81,511	81,511				81,511
	Kaloleni	60,000	60,000	60,000	124,660	124,560	124,560	50,000	67,700	*				74,609
	Bamba	100,085	100,085	100,085	100,085	100,085	100,085	100,085	100,085	*				88,964
	Total	362,596	362,596	362,596	427,256	427,156	427,156	352,596	370,296	203,511				366,195
	Average	90,649	90,649	90,649	106,814	106,789	106,789	88,149	92,574	50,878				

* No data available

Source; Various Monthly Reports (2003 – 2005).³⁶³⁶ Estimates from Monthly Reports compiled by the Divisional Livestock Extension Officers and filed with the respective DLPO offices

Annex 4.0: Operations work plan for Indigenous Poultry VCA (October 2005)

Day /Date	Activity	Focus	Venue /Locality	District	Time	CRSP (K) staff
Mon. 10/10	Documentation review and assignment orientation	Available data within CRSP (K)	CRSP-K office	Kilifi	12.00pm–5.00pm	William
Tues. 11/10	Pre-field consultation on survey tools and approach	Survey tools and general orientation	CRSP-K office	Kilifi	9.00am–5.00pm	William, Ross Thoya, Mwanzighe and Kasina
Wed. 12/10	Visit chicken auction	Chicken traders /brokers	Bamba market	Kilifi	8.30am–11.00am	Kasina, Swaleh and Iha
	Focus group discussions with producers	Poultry farmers – Bengoni	Bengoni - Kathoroni	Kilifi	2.00pm–4.00pm	Iha and Kasina
Thurs. 13/10	Visit chicken auction	Chicken traders /brokers	Kinango market	Kwale	8.30am–11.00am	William and Iha
	Focus group discussions with producers	Poultry farmers (Nzovuni, Mkilo and Chizini)	Nzovuni	Kwale	2.00pm–4.00pm	William and Iha
Fri. 14/10	Office consultations	Town Council - Mariakani	Mariakani	Kilifi	9.00am–10.30am	William and Kasina
	Visit chicken auction	Chicken traders /brokers	Mariakani market	Kilifi	10.30am–12.00pm	William and Kasina
	Focus group discussions with producers	Poultry farmers (Chilumani A & B, Mulola)	Chilumani A	Kwale	2.00pm–4.00pm	Mulongo, Babu, William and Kasina
	Preliminary and progress consultations	Programme Director, CRSP (K)	Mariakani	Kilifi	4.30pm–5.00pm	William
Sat. 15/10	Visit chicken auction	Chicken traders /brokers	Samburu market	Kwale	8.30am–10.00am	Mwanjole and Kasina
	Organisational consultations	Market authorities - Samburu	Samburu market	Kwale	10.00am–11.30am	Mwanjole and Kasina
Mon. 17/10	Focus group discussions with producers	Poultry farmers (Mabesheni)	Mabesheni (Small Farm Reservoir)	Kwale	9.00am–12.00pm	Kasina and Ngala
	Focus group discussions with producers	Poultry farmers (Chigato Central, Mwache)	Mwache	Kwale	2.00pm–4.00pm	Mapenzi and William

Cont...

Day /Date	Activity	Focus	Venue /Locality	District	Time	CRSP (K) staff
Tue. 18/10	Secondary data review and identification of issues	Available information within CRSP (K)	CRSP – K office	Kilifi	8.30am–11.00pm	Kasina, Ross, Margaret and William
	Hold discussions at consumption end	Operator of medium motel - Mariakani	Mariakani	Kilifi	11.00am–12.00pm	Kasina
	Focus group discussions with producers	Poultry farmers (Mwaruphesa, Chanzou 1 & 2)	Mwaruphesa	Kwale	3.00pm–5.00pm	Kasina and Matilda
Wed. 19/10	Hold briefs - Kilifi livestock office, obtain secondary data	DLPO & DLEOs and the DVO	Kilifi Livestock Office	Kilifi	9.00am–11.00am	Kasina
	Focus group discussions with producers	Poultry farmers (Karimani-mweza)	Karimani-mweza – Ndatani Pri. School	Kilifi	2.00pm–4.00pm	Kasina and Iha
Thur. 20/10	Hold discussions at consumption end	Operator of medium motel - Mariakani	Mariakani	Kilifi	7.00am–7.30am	
	Visit chicken selling points and slaughterhouses	Chicken traders and slaughterhouses	Mackinnon Road, Majengo & Likoni – Mombasa	Mombasa	9.00am–1.00pm	Kasina
Fri. 21/10	Hold briefs - Kwale livestock office, obtain secondary data	DLPO & DLEO and the DLEC	Kwale Livestock Office	Kwale	10.00am–1.00pm	William
	Focus group discussions with producers	Poultry farmers (Marondo)	Marondo	Kwale	3.00pm–5.00pm	William and Matilda
Sat. – Tue. 22 - 25/10	Data consolidation and report drafting			Nairobi		

Annex 5.0: Levels of participation and range of consultations

Day /Date	Activity	Numbers	Remarks
Wednesday; 12/10	Chicken traders in Bamba	2 (all men)	
	Focus group discussions with producers - Bengoni	45 (38 women, 7 men)	
Thursday; 13/10	Visit chicken auction - Mariakani	4 (2 women, 2 men; 3 traders, 1 broker)	
	Focus group discussions with producers - Nzovuni	42 (29 women, 13 men)	
Friday; 14/10	Office consultations	2 officers	Consultations held with the Town Clerk and the Treasurer
	Visit chicken auction	3 (all men traders)	Operating from one locality with self-developed sheds
	Focus group discussions with producers – Chilumani A	14 (9 women, 5 men)	Limited participation and presence of farmers from Mulola due to a change in time for the meeting
Saturday; 15/10	Visit chicken auction - Samburu	4 (2 women traders; 1 transporter /man; 1 market officer)	
Monday; 17/10	Focus group discussions with producers - Mabesheni	12 (10 women, 2 men)	
	Focus group discussions with producers – Mwache	22 (15 women, 7 men)	Weak mobilisation
Tuesday; 18/10	Hold discussions at consumption end – Balance Diet Cafe	1	With the operator
	Focus group discussions with producers - Mwaruphesa	14 (9 women, 5 men)	Low attendance due to the LASDAP process and a funeral in the neighbourhood
Wednesday; 19/10	Hold briefs - Kilifi livestock office, obtain secondary data	3 officers	Representing the district as a whole and one of our focus divisions
	Focus group discussions with producers – Karimani-mweza	35 (23 women, 12 men)	High numbers associated to another CRSP (K) activity
Thursday; 20/10	Hold discussions at consumption end – Tabora Motel	1	
	Visit chicken selling points and slaughterhouses	3 traders, 1 vet officer	Majengo market
Friday; 21/10	Hold briefs - Kwale livestock office, obtain secondary data	3 officers	Representing the district as a whole and 1 divisions of interest
	Focus group discussions with producers - Marondo	28 (25 women, 3 men)	Representing a successful VDO

Annex 6.0: Population and status of capacity strengthening of VDOs, May 30 2005

VDO	Village population	Rating (level)
Bengoni	1,000	3
Bofu	1,980	4
Bofu	-	2
Bondora	-	1
Bonje	700	5
Boyani	-	0
Bumburi	560	0
Busa	-	0
Chanzou 1	-	3
Chanzou 2	-	3
Chengoni A	-	3
Chengoni B	-	3
Chibunga	-	0
Chigato Central	745	3
Chigombero	1,240	3
Chigomeni	734	2
Chikomani	735	0
Chikuyu	467	1
Chikwakwani	886	4
Chilumani A	811	4
Chilumani B	727	3
Chinguluni	532	5
Chirima cha Uha	-	1
Chizini	726	3
Chongongwe	520	5
Dambale	-	2
Dangarani	-	3
Deri	-	1
Dzivani	-	1
Dzombo	1,008	2
Dzungwe	989	0
Fulugani	1,051	2
Gandini	-	1
Gebe	-	1
Gona	683	2
Guro	934	5
Gwasheni	371	3
Julani	1,174	1
Kafuduni A	1,362	2
Kafuduni B	1,237	1
Kalalani	854	1
Kaluweni	487	4
Kaphingo	546	1
Karimani Mweza	992	3
Katolani	-	1
Katsimba Lwena	-	1
Kavuka	-	1
Kibandoango	-	1
Kidzuvini	695	4
Kilibole	801	3
Kirumbi	-	5

Kwa Kadogo	-	1
Lutsangani	799	3
Luwanga	-	1
Luweni	567	0
Mabamani	-	2
Mabesheni	460	4
Mabirikani	618	0
Mafufuni	-	3
Majengo	445	3
Makuluni	-	1
Marondo	-	3
Matsambo	1,469	2
Matumbi	758	4
Mavarata	527	0
Maweu	661	3
Mazeras E	1,030	1
Mazeras W	974	3
Mazola	807	3
Mazumalume	-	0
Mbujani	442	4
Mbuyuni	1,250	0
Mdune	619	3
Mgamani	-	1
Mgandini	900	5
Michirangombeni	-	0
Midoina	-	3
Miguneni	2,471	1
Migunjini	-	3
Miyani	1,394	3
Mkanyeni	650	0
Mkulungombe	484	2
Mlalo	-	3
Mlola	680	0
Mnazi Mmoja	605	4
Mnyenzi	1,681	3
Mpirani	1,230	3
Mtaa Central	747	2
Mulola	-	4
Mwabila	860	4
Mwache	675	3
Mwachiganje	-	0
Mwachipa	420	3
Mwanda A	887	3
Mwanda B	653	3
Mwangani	800	5
Mwangoloto	-	1
Mwaruphesa	-	3
Mwashanga	998	0
Mzizi	-	1
Ndatani /Bwaga	-	2
Nihutu	533	4
Nyando	435	0
Nzendereni	-	0

Nzovuni	879	3
Pemba	781	3
Sega	607	0
Sembe	-	3
Shangia	-	1
Silaloni	-	1
Sirari Motanzi	-	1
Takawa	-	0
Vikolani	-	0
Vitsakaviri	343	0
Yapha A	-	1
Yapha B	-	0

Legend for Rating:

- Level 0 = Dormant /partially functional
- Level 1 = Infancy /initial development
- Level 2 = Adolescence /growing up
- Level 3 = Prime indication of some maturity
- Level 4 = Mature /ability to steer own development
- Level 5 = Independent /fully on their own

Source; CRSP (K) (courtesy of the SO)

Annex 7.0: Field contacts and consultations

Nature	Contact person	Designation	Locality
Trading	Maluki Muasya	Distant trader	Bamba, Samburu, Mariakani and Mombasa (Marikiti & Majengo)
	Martha Muli	Distant trader	Kinango, Mwaguru, Mombasa (Majengo)
	Mariam Mose	Distant trader	Kinango
	Mama Halima	Local Trader	Samburu
	Mama Betti	Local Trader	Samburu
	Kibao Zungumzo	Broker / collector	Kinango, Mwaguru (interior to centre)
	Maluki Munyao	Single-base trader	Mariakani
	Mukandi	Distant trader	Mariakani, Samburu, Mombasa (Marikiti & Majengo)
	Peter Ndolo	Motel operator	Mariakani
	Dickson Mulei	Market trader	Majengo Market - Mombasa
Office consultations	Sophie Munyantzi	Treasurer	Mariakani Town Council
	Jane Ngunjiri	Town Clerk	Mariakani Town Council
	Martin Okonji	DLPO	Kilifi District
	Peter Kimondo	DVO	Kilifi District
	Hassan Ali Mwangi	DLEO	Bamba Division
	Evanson Mwanzighe	DLEO	Samburu Division
	Lewis Moto	Veterinary Officer	Kibarani Division Office, Mombasa
	Francis Kangunu	DLPO	Kwale District
	Samson K. Njenga	DLEC	Kwale District
	Patrick Mwachiko	DLEO	Kinango Division

Annex 8.0: Gauging requirements and opportunities for RED interventions in selected programme areas

Production cluster	Status assessment			
	Potential for increased numbers ³⁷	Interest among the local population in the enterprise	Willingness to learn and develop indigenous Poultry as a business	Interest and willingness for business services
Bengoni cluster	✓	✓		
Nzovuni cluster	✓			
Chilumani cluster	✓	✓	✓	✓
Mwaruphesa cluster	✓	✓	✓	✓
Karimanimweza cluster			✓	
Mabesheni cluster	✓		✓	
Mwache cluster	✓		✓	
Marondo cluster	✓	✓	✓	✓

³⁷

Based on current poultry care arrangements and notable interest among the respondents

Annex 9.0: Priorities comparison by different categories and clusters

Locality /cluster ³⁸		Priorities' rating			
		Priority 1	Priority 2	Priority 3	Priority 4
Chicken producers	Bengoni cluster	1	6	3	4
	Nzovuni cluster	1	3	6	7
	Chilumani cluster	1	4	3	5
	Mwaruphesa cluster	1	3	5	8
	Karimanimweza cluster	2	1	7	
	Mabesheni cluster	1	3	4	5
	Mwache cluster	1	3	7	6
	Marondo cluster	3	1	1	10
Distant traders	Bamba	9	7	3	11
	Mariakani	9	11	3	
	Samburu	11	3	7	
	Kinango	9	3	7	
Bulking services	Bamba	3	9	7	
	Mwaguru /Kinango	3	9	7	
	Samburu	3	9	7	
	Mariakani	3	9	7	
Polarised traders	Mariakani	9	11	3	
	Mombasa	7	6		
Informal breeders	Mwaruphesa	7	1	4	3
Producer groups	Bamba	1	6	3	4
Consumer-end	Mariakani	7	5		
	Mombasa	7	5		

LEGEND:

1. Training on production and poultry flock management
2. Support in access to feeds for poultry
3. Disease identification and management
4. Breeds improvements' support
5. Market information
6. Networking with reliable buyers
7. Knowledge about where to source and access quality flocks
8. Links with providers of veterinary services for poultry
9. Access to credit for improved business
10. Groups' development for balanced support in poultry sub-sector
11. Development of marketing infrastructure (including sheds)

³⁸ The clusters incorporate the VDOs /villages in which participants were drawn from for the FGDs.

Annex 10.0: Base working area for market margins

Production end		Bengoni /Nzovuni /Mwaruphesa /Marondo /Karimani-Mweza /Mwache /Mabesheni (averages) - producers			
Costs			per month	Costs per chicken	
Opportunity cost (6 - 8 months)		(for a flock of up to 20 birds)	20	7	
Food & accommodation (6 - 8 months)			20	7	
Salary allocation per bird care			6	42	
Total production costs (for up to 20 birds flock size)				56	
		HEN		AV. Price	
Est. total production cost per bird	56	Price range	50 - 80	65	
Selling price	65				
Gross margin	9				
Purchase costs per chicken	0	Profit margin			
Profit	9	16.07142857			
		COCK		AV. Price	
Est. total production cost per bird	56	Price range	80 - 120	110	
Selling price	110				
Gross margin	54				
Purchase costs per chicken	0	Profit margin			
Profit	54	96.42857143			
		Brokering point (lowest market end) Bengoni /Nzovuni /Kinango (averages) - brokers			
Costs				Costs per chicken	
Trader's own transport - to and from market bulking per chicken		(15 chicken)	**	2	
Transport per chicken				2	
Food				0	
Contingency				10	
Town transport				2	
Accommodation per night				1	
Purchase costs per chicken				3	
		HEN		AV. Price	
Buying price	65	Price range	50 - 80	65	
Selling price	100				
Gross margin	35				
Purchase costs per chicken	13	Profit margin			
Profit	22	33.84615385			
		COCK		AV. Price	
Buying price	110	Price range	80 - 120	110	
Selling price	150				
Gross margin	40				
Purchase costs per chicken	13	Profit margin			
Profit	27	24.54545455			
		Source /tertiary markets (smallest; Bamba) Bamba (averages) - trader			
Costs				Costs per chicken	
Trader's own transport - to and from market		(30 chicken)	200	6.6667	
Transport per chicken			2	2	
Food		(Kshs 20 for 30 chicken)	0.666667	0.6667	
Contingency			10	10	
Town transport			2	2	
Accommodation per night			1	10	
Purchase costs per chicken				31.333	
		HEN		AV. Price	
Buying price	100	Price range	80 - 120	100	
Selling price	135				
Gross margin	35				
Purchase costs per chicken	31.333	Profit margin			
Profit	3.6667	3.66666667			
		COCK		AV. Price	
Buying price	150	Price range	130 - 170	150	
Selling price	190				
Gross margin	40				
Purchase costs per chicken	31.333	Profit margin			
Profit	8.6667	5.77777778			

Secondary markets (Kinango, Guru Guru, Samburu)

Costs			Costs per chicken
Transport to and from MSA (trader) /Mariakani	(50 chicken)	200	4
Transport per chicken		2	2
Market entry fees		2	2
Food	(Kshs 20 for 50 chicken)	0	0
Contingency		10	10
Town transport		2	2
Accommodation per night		1	0
Purchase costs per chicken			20

Mariakani /Samburu /Kinango - trader (averages)

	HEN	Price range	AV. Price
Buying price	135	100 - 170	135
Selling price	220		
Gross margin	85		
Purchase costs per chicken	20		
Profit	65	48.14814815	

	COCK	Price range	AV. Price
Buying price	190	170 - 210	190
Selling price	260		
Gross margin	70		
Purchase costs per chicken	20		
Profit	50	26.31578947	

Primary /end-markets (Likoni, Weighbridge, Mombasa [3])

Costs			Costs per chicken
Rent per day	(100 chicken)	200	0.8
Transport per chicken		2	0
Market entry fees		2	1
Food	(Kshs 50 for 50 chicken)	0	1
Contingency		10	20
Water		2	1
Accommodation per night		1	4
Purchase costs per chicken			27.8

Mombasa [Majengo] (averages) - trader

	HEN	Price range	AV. Price
Buying price	220	190 - 250	220
Selling price	260		
Gross margin	40		
Purchase costs per chicken	27.8		
Profit	12.2	5.545454545	

	COCK	Price range	AV. Price
Buying price	260	250 - 270	260
Selling price	350		
Gross margin	90		
Purchase costs per chicken	27.8		
Profit	62.2	23.92307692	